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MAR 2 - 13

NEWSLETTER
OF THE
OFFICE OF CEREAL INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

Volume V

JAN 2 1913

1913

Vol. V.

January 2, 1913.

OFFICE NOTES

Miss Lilliam M. Fissel has been transferred to this Office from the Office of Foreign Seed and Plant Introduction to fill the vacancy caused by the transfer of Miss Mary E. Holland in November last to the Bureau of Biological Survey.

The office seminars, which have been held during December, 1912, will be resumed on January 6, 1913, the topics for that and the subsequent week being as follows:

January 6.
"Cereal Work on the Nephi Substation"
by P. V. Cardon
"Cereal Work on the Dickinson Substation"
by J. A. Clark

January 13. A discussion of the relation of special lines of work and field men to office policy and experimentation,
by C. R. Ball.

Farmers' Bulletin 518, "Winter Barley," by H. B. Derr, issued December 27, 1912, is now ready for distribution.

A manuscript entitled "Cereal Experiments in the Texas Panhandle," by Messrs. Ross (of the Office of Cereal Investigations) and Leidigh (now of the Kansas Agricultural Experiment Station) was submitted for publication on December 27, 1912.

A manuscript entitled "Cropping Systems for Wheat," by F. D. Farrel, formerly of the Office of Cereal Investigations, was submitted on December 31 for publication as a farmers' bulletin.

FIELD NOTES

LOUISIANA:

Crowley Rice Experiment Station. Mr. J. Mitchell Jenkins arrived in Washington on December 27, 1912.

January 2, 1913.

TEXAS:

Amarillo Cereal Field Station. December 16. Weather continues dry and although it has been rather cold for some time none of the crops are suffering. Many of the days are pleasant, although the nights are quite cold. Winter grains planted a month ago are not yet showing above the ground.

News reports state that the entire Texas Panhandle is blanketed with snow, which fell steadily all day on December 22. A strong wind accompanied the snowfall.

Rice Farm (Beaumont). December 19. Good weather obtains and the laboratory work is progressing nicely.

KANSAS:

Manhattan. December 16. Mr. McKee reports that he arrived in Manhattan on December 13 and found the weather much milder than in Colorado where the snowfall was 2 inches deep when he left. He states that, although there have been several snows in Colorado, not enough has fallen at Manhattan to cover the ground.

He expected to visit University Farm and the experimental plats and to examine the records of the Agronomy Department with a view to getting some helpful suggestions for the improvement of the experimental work at Akron.

December 18. Mr. Kiene reports that he arrived at Manhattan on December 10, and consulted with Prof. Jardine relative to cooperative work at Hays, inspected and studied various lines of investigation and equipment on the station and also studied the station records. According to Mr. Kiene's observations, wheat along the railroad in the Republican Valley of Nebraska appeared to be in good condition. Farther east, wheat fields looked even better, being best in the Blue Valley north of Manhattan, though the acreage in the last mentioned region appeared to be not very great.

Mr. Kiene arrived in Washington on January 2.

SOUTH DAKOTA:

Highmore Substation. December 18. It is reported that the snow which fell here on the 18th was general throughout this section. This will be very beneficial to winter grains which are looking fairly well in spite of unfavorable weather. Winter rye and wheat planted on land where corn stalks are standing are still in

good shape.

The method of sowing wheat in trenches has thus far proved successful, the dry soil having drifted in so that it protects the crowns of the wheat plants. Jack-rabbits have done considerable damage on fallowed land and are present in such large numbers that trapping, shooting and poisoning apparently have little effect.

Mr. Champlin reports that he addressed the County Teachers' Association and judged the boys' corn contest on December 14.

WYOMING:

Cheyenne Experiment Farm. Prof. E. H. Watson reported on December 19 that blizzards are of daily occurrence. The drilling of the well on the farm has been completed. The water is excellent.

IDAHO:

Aberdeen Experiment Station. December 13. Lowest temperature registered to date, 3 degrees above zero. Total precipitation to date, 11.69 inches.

December 24. Weather has been very cold for some days, the temperature being close to zero. On the 20th the temperature was 14 degrees below zero and on the 22d, 5 degrees below. The maximum temperature seldom exceeds 32. Snowfall is light for this season of the year.

The recent high prices obtained for soft wheats as compared to those for hard wheats caused several dry-farmers of this district to discontinue the growing of Turkey wheat, although this condition is probably only a temporary one owing to the great shortage of the crop in the Mississippi Valley. Certain millers having a trade which demands white wheats are responsible to a large extent for this change of attitude since they are advising dry-farmers to grow these varieties in preference to the Turkey wheat. They have not succeeded, however, in influencing the best dry-farmers.

OREGON:

Eastern Oregon Dry-Farming Station (Moro). December 16. There was no precipitation during the last half of November. During December, there was a total precipitation of 0.63 inch, mostly in the form

of rain. Some snow fell on the morning of December 13. During the last few days of November, freezing of the ground did not interfere with plowing. Since the first week in December, however, the ground has been frozen hard. The lowest temperature yet recorded was 19 degrees on December 8 and 9. From December 10 to 15 inclusive the temperature was but little above freezing, the maxima on the 10th, 11th, and 12th, being 25, 28, and 29 degrees, respectively.

A winter grain nursery has been started, 200 head-rows and 10 eightieth-acre plats of bulk head selections having been planted.

No winter grains, except winter rye seeded for pasture, are yet showing above ground. Of the grain-sorghums which matured sufficiently to thrash the yields are as follows:

	G.I.No.	Bushels per acre
White kafir	342	9.9
Manchu Brown kaoliang	261	4.2
" " "	171	5.6
" " "	328	8.8
Dwarf broomcorn	442	13.5

All grain-sorghums were grown on land previously seeded to wheat. One plat of Minnesota Amber forage sorghum (South Dakota No.341) seeded on summer fallowed land yielded at the rate of 34 bushels per acre.

CALIFORNIA:

Biggs Cereal Field Station. December 14. Weather during the past week has been unsettled. Rain has interfered with field construction work on the rice plats. The station has received many requests for information concerning rice culture.

Chico. December 23. Weather is cold for this section. Ground has been in excellent condition for field work and the past week has been spent in seeding winter wheat and a portion of other grains. Seeding will probably be completed by the end of this week. Approximately the same area will be devoted to grains this season as in the past.

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NEWSLETTER

OF THE

OFFICE OF CEREAL INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

Volume V

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January 16, 1913.

OFFICE NOTES

OFFICE OF CEREAL INVESTIGATIONS

Reassignments of Clerical Force

The following assignments of work and workers are made, subject to change as the needs of the service require:

Mrs. Kinney (Administrative Clerk)

1. General administrative supervision of all clerical work and workers, including messenger.
2. Charge of all mail, incoming and outgoing.
3. Responsibility for all files:
    Catalogs (seed, implement, apparatus),
    Correspondence,
    Indices (of literature and general information),
    Mailing lists,
    Manuscripts,
    Maps and charts,
    Photographs (negatives, prints and slides),
    Project reports, (preparation of these reports),
    Publications,
    Reports (and preparation thereof).

Miss Hudson (Financial Clerk)

1. Responsibility for all
    Accounts, office and expense,
    Appointments, letters of,
    Authorization, letters of,
    Bills of lading,
    Certifications, letters requesting,
    Memoranda of understanding,
    Project estimates,
    Requisitions (stock or purchase),
    Vouchers.
2. Responsibility for
    Inventory,
    Stock supplies.

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Miss Chadwell (Clerk and Stenographer)

Messrs. Ball and Warburton.
Preparation of newsletter.

Miss Fissel (Clerk and Stenographer)

Messrs. Harlan and Wermelskirchen.

Miss Peacock (Clerk and Stenographer)

Messrs. Chambliss and Potter.

Miss Schwab (Clerk and Stenographer)

Mr. Derr and Dr. Leighty.
Stencil cutting for newsletter and other circulars.

Miss Roberts (File Clerk and Typist)

Correspondence files and report writing.

Mr. Townsend (Clerk)

Responsibility for Cereal Laboratory:
Accession records of cereals, including samples from trilocal experiments,
Distribution records of cereals,
Cooperators' reports (sending blanks and filing reports as far as desired by specialists in charge),
Preparation of samples for distribution and for chemical and germination tests,
Preparation of cereal samples for reference collection.

Mr. Yates (Messenger)

Specified messenger's duties. (All requests requiring his services outside of the Office must be made through Mrs. Kinney).

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RELATIONS OF THE SCIENTIFIC STAFF IN OFFICE AND FIELD

The following is a summary of the presentation of this topic by Mr. Ball at the Office Seminar on January 13:

I. The Unit is Cereal Investigation as a Whole.

All members of the staff are working primarily for the advancement of cereal investigations as a whole, although charged with responsibility for definite lines of investigation.

II. Mutual Planning of Experiments.

(a) Men charged with investigation of specific crops are supposed to have or to acquire expert knowledge of such crops.

(b) Men charged with the conduct of cereal experiments on field stations are supposed to have or to acquire expert knowledge of cereal crops and cropping conditions within the districts in which their stations are located.

(c) Experiments on the cereal field stations should be planned and interpreted jointly by the man having expert knowledge of the crop and the man having expert knowledge of the locality.

III. Publication.

For the most part, papers relating to specific crops should be prepared by the men charged with investigation of such crops, and papers presenting the results of cereal experiments in definite districts by the men charged with the conduct of such experiments in said districts. In some cases joint publication may be proper and desirable.

IV. Coordinate rank and value of position.

Positions on office staff or field staff are held to be of equal rank and value for equal ability and service. Transfers may be made from one to the other without prejudice where inclination and special ability warrant.

January 16, 1913.

A change has been made in the method of issuing authorizations, beginning January 1, 1913. No letters of instruction will be issued, but employees authorized to perform specific work or travel will be required to do so "in accordance with the fiscal regulations," without specific instructions. It is, therefore, essential that each person to whom an authorization is issued become familiar with the fiscal regulations in connection with the particular line of work or travel to be performed.

A manuscript entitled "The Culture of Wheat," by Mr. F. D. Farrell, formerly Agronomist in this Office, was submitted on January 7 for publication as a Farmers' Bulletin.

At the National Corn Exposition to be held at Columbia, S. C., from January 27 to February 8, this Office will be represented by a cereal exhibit comprising the greater portion of that sent to the United States Land Show at Chicago (November—December, 1912) to which will be added a case containing cereals adapted to the Southern States. In that portion of the exhibit devoted to rice, the various milling products of one variety, Carolina Gold, are represented. The general culture of rice in the United States and particularly in South Carolina is represented by 21 bromide views.

FIELD NOTES

TEXAS:

Amarillo Cereal Field Station. January 9. The weather is moderating today. At night, however, the temperature usually drops below zero.

Rice Farm, Beaumont. January 4. Weather for the past week has been fair and warm.

January 9. The Rescue grass and Burr clover planted in the pasture plot have made an excellent growth and a good stand was secured in both cases. Bermuda grass, Rescue grass, and Burr clover will be seeded together, the clover and Rescue grass to be sown this fall at the rate of 10 and 20 pounds (hulled seed) respectively and the Bermuda grass to be planted in the spring at the rate of 10 pounds per acre. In some of the wet sections cuttings of Para grass will be set in the spring.

A rice exhibit will be sent from this farm to the National Corn Exposition to be held at Columbia, S. C.

The laboratory is nearing completion. This makes the fourth new building erected in the past year, the barn, seed-house, and chicken house having been completed.

January 16, 1913.

Arrangements have been made by which the station is to have direct telephone connection with the Beaumont exchange. As the station is located six miles from Beaumont, this service will be a great convenience in the transaction of business.

Mr. T. G. Walton, District Agent for the Office of Farmers' Cooperative Demonstration Work, Bureau of Plant Industry, together with Mr. George A. Smith, Farm Demonstrator for Jefferson County, visited the station on January 1. After studying the plotting system and examining the new buildings, they expressed themselves as being very favorably impressed with the conduct of the station and the improvements being made thereon.

IOWA:

Agricultural Experiment Station, Ames. January 7. Prof. L. C. Burnett, collaborator with this Office, reports that the Farmers' Short Course began December 30 and will continue to January 11. The lectures in seed breeding are under his charge.

The Iowa Corn Growers' Association are now holding their annual show at Ames and the exhibit surpasses in quality any previous one. Mr. Burnett says the small grain is of high quality, the Grand Champion sample of oats being the best he has ever seen.

COLORADO:

Akron Experiment Farm. Mr. McKee arrived in Washington on January 3. His stay here will be short, as he expects to return to his station on January 22.

IDAHO:

Aberdeen Experiment Station. January 10. This section of the country is experiencing severe winter weather. Snow has been falling for the past three days, the snowfall being light and usually accompanied by wind which caused drifting, making transportation difficult. Railroad schedules are consequently very irregular. The temperature at times was 21 degrees below zero. The water pipes under the house on the Station, which have been considered sufficiently protected, were frozen during the unusually cold weather. The large potato-storage warehouses have been keeping fires going night and day to prevent freezing.

Dean Carlyle of the University expects to visit the station during the latter part of January.

January 16, 1913.

OREGON:

Eastern Oregon Dry-Farming Station, Moro. January 4.

Precipitation: Between December 17 and 31, the precipitation was 1.49 inches, making the total for the month of December 2.12 inches. On December 29 nearly 0.75 inch of rain fell in about 12 hours. This is the heaviest rainfall for a single day during the calendar year of 1912. On December 30 the rainfall was 0.32 inch. To date, no snowfall has remained on the ground as long as 24 hours. Heavy rains have occurred in the northwestern section of the State, and according to newspaper reports the rainfall at Portland on December 29 measured 2.25 inches.

Temperature: Moderate temperature has prevailed during this period, the minimum temperature ranging from 24 to 30 degrees above zero, except on the night of December 31, when the minimum temperature was 2 degrees below zero -- 20 degrees colder than on any other night during December. On January 1, however, thawing began and the minimum temperature for that night was 29.5 degrees. Maximum temperature from 36 to 44 degrees, except on December 29, when the maximum reached was 51.5 degrees. Fortunately, the weather was warm enough just preceding the heavy rains to thaw out the ground well and permit the rain to soak in.

Very few of the winter grains in this section are up except in the northern part of Sherman County, where land is much more sandy and the weather somewhat warmer. The heavy rains during the latter part of December will undoubtedly be of great benefit to next year's crops.

CALIFORNIA:

Biggs Cereal Field Station. December 28, 1912. Lowest temperature, 22 degrees, December 24. The rice in the warehouses at Biggs has been damaged by becoming heated.

160 acres of land near Biggs have been purchased by a local firm for rice growing and three wells, each a foot in diameter, are being sunk for irrigating next year's crop.

The Biggs exhibit at the Sacramento Land Show last week contained a miniature rice field which attracted much attention.

January 4. Weather continues fair, but unusually cold for this section. Lowest temperature, 20 degrees, January 4. Several small showers have at times interrupted field work. Complaints of dry weather are being made in some parts of the state.

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NEWSLETTER

OF THE

OFFICE OF CEREAL INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

Volume V

FEB 1

1913

February 1, 1913.

OFFICE NOTES

Miss Mona E. Roberts was appointed to the position of Clerk-Typewriter in this Office on January 16.

Mr. Clyde McKee, who has been in charge of the cereal investigations of this Office on the Akron Experiment Farm (Colorado), was transferred January 31 to the Office of Farm Management to take up work in cooperation with the Extension Department of the Kansas Agricultural College (Manhattan). He will be located at Norton, Kansas.

Mr. H. B. Derr left for Columbia, S. C., on January 20, to assist in the installation and demonstration of the exhibit of this Office at the National Corn Exposition.

Messrs. Jenkins, Leighty and Warburton left on January 23 to attend the National Corn Exposition, returning on the 30th.

Mr. Ball has made two trips to Brooklyn, New York, within the past two weeks to testify as to the value of "Miracle" or "Stoner" wheat as compared with other varieties under test by this Office in the case of Russell vs. The Brooklyn Daily Eagle, a libel suit based on alleged misrepresentations in the exploitation of said wheat which was sold at $1.00 per pound. On his second trip, Mr. Ball was accompanied by Mr. P. V. Cardon of the Nephi (Utah) Substation. Mr. Cardon, however, was not called upon to testify. According to a recent newspaper dispatch, the suit was won by the defendant.

The topics for discussion at the first two seminars to be held in February are as follows:

February 3.- "Wheat Breeding, and varieties for the humid areas," by Dr. Leighty.

"Cereal Disease Work, with special reference to imperfect fungi in cereals," by Mr. Potter.

February 10. "Cereal Work on the Amarillo Cereal Field Station," by Mr. Rothgeb.

"Feeding value of kafir; the making of brooms and brushes," by Mr. Wermelskirchen.

February 1, 1913.

"Cereal work at Arlington Farm, with special reference to cereal improvements for the Southern States," by Mr. Stanton.

The following were the topics of discussion at the Office seminars held during the latter half of January:

January 20.

"Cereal work on the Bellefourche Experiment Farm," by Mr. Salmon.

"Cereal work on the Akron Experiment Farm," by Mr. McKee.

January 27.

"Four prominent varieties and market qualities of rice grown in the United States," by Mr. Chambliss.

"Demands of the barley market of the United States with reference to types of barley to be grown and possible changes in the demand," by Mr. Harlan.

STATION NOTES

TEXAS:

Amarillo Cereal Field Station. January 13. Weather quite cold, with some snow, but not sufficient to benefit the winter crops. Ground has been frozen for more than two weeks. Temperature has been close to zero several times, dropping to 7 degrees below on the 7th. Considerable trouble has been experienced by the freezing of the water pipes between the well and the barn and the ground has been mulched with manure to prevent further freezing.

January 25. Weather has greatly moderated and is very pleasant during the day, but the nights are still cold and frosty. Maximum temperature since the 15th has ranged from 35 to 64 degrees, while the minimum has ranged from 11.5 to 43 degrees.

Rainfall for January, to date, only .01 inch. Winter grain plats are making no growth. Those grains that were above ground in the fall have been pastured close to the ground by jackrabbits. The nursery is not looking as well as the field plats.

February 1, 1913.

SOUTH DAKOTA:

Brookings - Agricultural Experiment Station. January 14. Prof. Manley Champlin, Collaborator with this Office, reports that a snowfall from 2 to 4 inches occurred in the western part of the state, resulting in a slightly improved condition of winter grains. The wheat at Brookings is still alive, notwithstanding the lack of snow at that point.

OREGON:

Eastern Oregon Dry-Farming Station (Moro). January 19.

Temperature: The coldest weather experienced to date was on January 4 and 5, when the minimum temperatures of 5 and 6 degrees below zero, and 22 and 25 above were recorded. Weather has been quite cold except for the first few days of the month. Highest temperature recorded, 53 degrees, on January 2. On the 2d and 3d, rain and thawing occurred followed by a sudden drop in temperature on the 4th, which left the ground covered, in many places, with a thick sheet of ice. It is very probable that this has injured the winter grains, though the extent of the damage can not be estimated at this time.

Precipitation; Total precipitation for January, to date, 1.29 inches. This has been principally snow, though some rain has occurred. Maximum for any one day, .70 inch (snowfall) on the 17th. This was followed next day by high winds, which caused snowdrifts from 2 to 5 feet deep, though the total snowfall has been only about 8 inches.

Harney Branch Experiment Station (Burns). January 20. Mr. Breithaupt, Collaborator with this Office, is at this date at Corvallis in consultation with Prof. Scudder regarding future work. He reports that the season has been severe for winter crops, with the temperature ranging as low as 16 degrees below zero, and a snowfall at date of writing of about 8 inches.

CALIFORNIA:

Biggs Cereal Field Station. January 20. Rainy weather obtains recently, though the rains for the past three days have not been heavy. Most of the surface water has disappeared. Interest in and requests for information about the rice crop still continue. From present indications, there will be about 4,000 acres seeded to rice in this locality this spring.

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NEWSLETTER

OF THE

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BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

Volume V

FEB 16

1913

February 16, 1913.

GENERAL ORDER NO. 172.

Attention is called to previous orders of the Department in regard to the prohibition of smoking in any buildings of the Department, and the accumulation of waste paper and refuse, and the storing of inflammable materials in the buildings. *

Directions are hereby given that there shall be no smoking whatsoever by any employees or other persons, in any building occupied by the Department, at all times. Any violation of this order should be reported at once to the Secretary's Office, and may be considered sufficient cause for dismissal.

All stock and supplies of alcohol, ether, and other inflammable supplies, other than in small laboratory lots, should be removed from and stored outside of all buildings occupied by the Department, except those specially constructed for that purpose.

All rooms and all offices, store rooms, etc., in the Department buildings should be left unlocked so the watchman can readily secure access to the rooms during the night. In the event that it is absolutely necessary to lock certain rooms, special permits should be secured from the Chief Clerk of the Department for the purpose, and the watchmen should be supplied with keys to specially locked rooms, with personal instructions as to the quickest method of securing access thereto.

James Wilson,
Secretary.

Attest:
C. C. Clark, Chief Clerk.

* General Order No. 5, Rules and Regulations of December 19, 1901, Special Order of May 22, 1911.

OFFICE NOTES

Mr. Chas. H. Clark was transferred to this Office on the 16th instant from the Office of Crop Acclimatization and Adaptation Investigations to succeed Mr. Clyde McKee, formerly in charge of the cereal investigations of this Office at the Akron Experiment Farm.

Mr. Derr returned on the 17th from Columbia, S. C., where for the past three weeks he has been engaged in

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demonstrating the exhibit of this Office at the National Corn Exposition. This exposition was continued for a week longer than was at first anticipated, because of the widespread interest awakened during the first two weeks of the show and the desire that the vast educational influence of the exhibits should be as farreaching as possible.

Mr. Donaldson leaves on the 18th instant for his station at Moccasin, Mont., and will stop en route at Bozeman for about a week to study flax varieties and consult with station officials regarding the flax work with a view to increasing his flax plats at Judith Basin and improving the cultural methods.

Mr. Salmon leaves on the 22d instant for his station at Newell, South Dakota.

Mr. Wermelskirchen leaves on the 23d instant for the Amarillo (Texas) Cereal Field Station, stopping en route at Manhattan, Kansas, for a few days to study the experiments conducted on University Farm.

Topics for discussion at the Cereal Investigations seminars of February 17 and 24, respectively:

February 17, "The Laying Out of Experimental Plats," by Mr. F. A. Kiene, Jr.

"The Systems Used at Different Stations and Their Defects or Advantages," by Messrs Babcock, Cardon, Clark, Donaldson, Jenkins, Rothgeb, and Salmon.

"Plans of Plats at Archer, Wyoming," by Mr. Jenkin W. Jones.

"Fundamental Station Data for Facing Sheet in Annual Reports," by Mr. C. R. Ball.

February 24, "Notes on the Corn Show," by Mr. H. B. Derr.

"Plans for the Improvement of the Oat Crop," by Mr. C. W. Warburton.

This Office is in the process of moving into its rooms, 220 Fourteenth St., S. W., (directly opposite the Bureau of Engraving and Printing) a recently completed building leased by the Department of Agriculture.

Stock in the Bureau property room was totally destroyed by fire early in the morning of the 8th. This

will entail considerable delay in the filling of requisitions for supplies.

Early the following morning fire was discovered at 1358 B Street, S. W., (just opposite the West Wing of this Department) which housed part of the work of the Office of Cotton Standardization and the paper-making experiments of the Office of Crop Technology. The contents of the building were almost completely destroyed.

STATION NOTES

TEXAS:

Amarillo Cereal Field Station. February 12. Weather has been very cold this month. The snowfall on the 3d was .09 inch; on the 8th, .14 inch; and on the 11th, .13 inch. The snowfall on the 11th was light, the precipitation being mostly rain.

Mr. Ross officially accompanied the Milo-Kafir Special of the Rock Island System on the 8th and 10th of February. He reports that the attendance was very good and the farmers seemed greatly interested in the speeches. Stops were made at Wildorado, Vega, Adrian, Amarillo, Groom, Jericho, Alanreed, and McLean. The largest attendance occurred at McLean, about 1500 people being present, and seven different speeches were made simultaneously at the depot platform.

OREGON:

Eastern Oregon Dry Farming Station (Moro). February 9. Precipitation from January 20 to February 8, .08 inch, in the form of snow. Warm, thawing weather prevailed during the last 2 weeks of January, the melted snow running down the canyons in torrents.

Maximum temperature for the last half of January, 48 degrees, on the 31st. From January 23 to 31, inclusive, the temperature was above 40 degrees each day. Since February 1, the weather has been much colder, the maximum from the 4th to the 8th, inclusive, being below 25 degrees. Minimum temperature, 7 degrees above zero, February 7.

Examination of winter grains after the thaw disclosed the fact that wheats and emmer were above ground, with good stands in most cases. The earliest and latest seedings of winter grains were not above ground. The sudden melting of the snow has left furrows from six to ten inches deep through many of the plats.

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CALIFORNIA:

Biggs Cereal Field Station. February 10. At present weather conditions are very pleasant. If no precipitation occurs within the next two days, the ground will be dry enough to work.

Principal work to be done at Biggs this spring is the preparation of the land for seeding to rice and it is hoped that one-half the acreage of the farm will be put in condition for this crop. As the ground is difficult to work, considerable labor will be required to prepare it for seeding. The black adobe soil dries very slowly so that comparatively little work has been accomplished this winter. About 10 acres have been seeded to oats for feeding purposes. When these are harvested the land will be summer fallowed and prepared for winter grains. It is expected that sorghum varieties (including broomcorn), corn, and alfalfa will be seeded this spring.

Plant Introduction Garden, Chico. February 10.

Mr. Adams reports that the winter grains at Chico are doing very nicely.

Dr. T. L. Lyon, Dr. H. H. Love, and Prof. E. G. Montgomery of Cornell University, Prof. T. A. Kiesselbach of the University of Nebraska, and Director W. M. Jardine of the Kansas Station visited the Office of Cereal Investigations en route home from the Corn Exposition. Prof. Manley Champlin of South Dakota, formerly of this Office, was also in attendance at the Exposition, but did not visit Washington.

MAR 5- '13

NEWSLETTER

OF THE

OFFICE OF CEREAL INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

Volume V.

MAR 1

1913.

March 1, 1913.

DEPARTMENTAL

General Order No. 174, dated February 20, 1913.

Attention is invited to a decision of the Comptroller of the Treasury, dated October 29, 1912, in which he holds:

> "That provision of the act authorizing such oaths to be administered by 'chief clerks of the various executive departments and bureaus or clerks designated by them for the purpose,' is understood to have reference to the executive departments at Washington and bureaus thereof. Had Congress intended to give an unlimited power to these chief clerks to designate other clerks to administer such oaths, regardless of the latter's service or location, it would appear to have been unnecessary to further enumerate, as the act does, the following clerks, viz., 'Principal clerks of the various national parks and other Government reservations * * * and principal clerks of the different Indian superintendencies or Indian agencies.' "

In future, jurats to accounts for travel or other expenses against the Department of Agriculture will not be accepted, if made before clerks not in the Department at Washington, or other persons not designated by Section 8 of the Act approved August 24, 1912, unless such other persons are otherwise empowered to administer oaths, for which no reimbursement will be allowed.

General Order No. 160* is hereby amended accordingly.

(Signed) James Wilson,

Secretary.

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* See abstract of this Order published under "General Notes" in Newsletter of September 7, 1912.

March 1, 1913.

MEMORANDUM FOR HEADS OF
OFFICES NO. 29, dated February 25, 1913.

Gentlemen:

We have had considerable trouble in the matter of granting leaves of absence while traveling on official business. To avoid such difficulties in future, applications for leave while traveling will be granted only when the leave is applied for in advance on blanks provided for that purpose. A copy of such blank is enclosed herewith.

Applications for leave of absence while traveling will not be granted unless it appears from the statement submitted in advance that the business to be transacted requires that the travel shall be performed at the time proposed, and if, after leave has been taken, the itinerary report submitted at the conclusion of the trip does not corroborate the preliminary statement on which the leave was granted, payment of the expense account will be suspended and the case will be submitted to the Chief of Bureau for such action as he may deem proper.

Very truly yours,

(Signed) B. T. Galloway,

Chief of Bureau.

An arrangement has recently been made between the Department of Agriculture and the Civil Service Commission whereby the district secretaries of the Commission will furnish to field officials of this Bureau lists of mechanics, etc., (in the respective districts) eligible for temporary service and available on short notice. A list of field stations will be furnished the district secretaries through the Commission for this purpose.

It is Mr. Ball's desire that the men in charge of field stations select names from such lists whenever practicable in hiring temporary laborers.

March 1, 1913.

OFFICE NOTES

Mr. J. Mitchell Jenkins will leave on the 4th instant en route to Crowley, La.

Mr. Jenkin W. Jones returns to the new farm at Archer, Wyoming, (near Cheyenne) on the 5th.

Mr. F. A. Kiene, Jr., left Washington on the 27th ultimo for Hays, Kansas; he will make a short stop at Manhattan, Kansas, en route.

Dr. H. B. Humphrey, formerly Pathologist for the Washington Experiment Station at Pullman, arrived in the Office on February 27 and will begin his duties as Pathologist in Charge of Cereal-Disease Work on March 1, when his appointment is effective.

The final Office seminar will be held March 5, when the program will be as follows:

"Work of the Williston Substation,"
by Mr. F. R. Babcock.

"A Cereal Herbarium,"
by Mr. C. R. Ball.

"The Kaoliangs: A New Group of Grain-Sorghums," Bulletin 253 of this Bureau, by C. R. Ball, was issued January 11, and is now available for distribution. Copies have been furnished to the staff of this Office.

Prof. L. C. Burnett of the Department of Farm Crops of the Iowa Experiment Station, a Collaborator with this Office, arrived in Washington on February 17 and will remain about 3 weeks. He is preparing for publication the data obtained in the cooperative experiments with oat varieties. This matter is intended as part of a joint bulletin covering the tests of selections from oat hybrids and commercial varieties conducted at the Iowa, Illinois, New York, and other stations.

Mr. J. D. Haslam of Regina, Saskatchewan, a member of a [illegible] Canadian financial commission, was a recent visitor to this Office.

March 1, 1913.

STATION NOTES

TEXAS:

Amarillo Cereal Field Station, February 25. Weather remains quite cold and dry. Spring work will soon be begun. Purchase has been made of a 5-year old horse which it is believed will prove a valuable addition to the farm stock.

Test was recently made of the Spalding Five Bottom Deep Tilling Machine made for a farmer in Colesburg, South Africa, and operated by a Holt Caterpillar engine. The operators were permitted to break about 6 acres on Series K. The sod was broken from 8 to 12 inches deep and about 3½ feet wide at a single operation. In the test made on old land on an adjacent farm, which had been plowed with a deep tilling machine 2 years ago, the soil was plowed to a depth of 17 inches and well pulverized. It is expected that this deeply broken plot on the farm will be of value in comparison with the shallow breaking on the plot adjacent.

CALIFORNIA:

Biggs Cereal Field Station, February 15. The weather is favorable for field work. A considerable acreage is being prepared for rice and interest in rice culture is not abating. It is reported that several southern rice planters will lease a large area for seeding to rice this spring in the vicinity of Richvale.

Many new settlers are arriving at Richvale, the majority of whom are interested in rice culture and will seed a small acreage this season.

Several of the large plow companies have demonstrated their plows on the rice stubble fields of Mr. H. H. Peterson. Very few of the plows worked successfully, the draft being too heavy. The rice planters have had difficulty in plowing the rice stubble. Steam and gasoline plows have not proved satisfactory. About 8 mules are required to a single plow, and little ground has been broken.

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NEWSLETTER

OF THE

OFFICE OF CEREAL INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

Volume V.

MAR 17

1913.

March 17, 1913.

DEPARTMENTAL

Rules for the use of the Department frank in forwarding printed and written matter.

1. No printed matter of any kind whatsoever should be franked unless such matter is printed at the Government Printing Office, with the sanction and approval of the Secretary of Agriculture.

2. No written matter should be franked unless such matter deals exclusively with the official work of the Department as authorized by law.

NOTE: If a for any reason it is desired to use the Department frank for the mailing of either printed or written matter other than above, the propriety of doing so should be submitted to the Chief or Assistant Chief of the Bureau in each instance for decision.

Each member of the Office staff is requested to send in his signature as ordinarily written in order that authorizations may be made out accordingly, thereby saving much time required to make out certificates that, for instance, "G. P." and "George P." Smith are one and the same person.

On the 17th instant the Senate confirmed the name of Dr. B. T. Galloway as Assistant Secretary of Agriculture. It is expected that Mr. William A. Taylor, the present Assistant Chief of the Bureau of Plant Industry, will succeed Dr. Galloway as Chief.

On March 6 an informal reception at the United States National Museum was tendered retiring Secretary Wilson by officials and employees of the Department of Agriculture.

The Civil Service Commission has announced an open competitive (non-assembled) examination, for men only, for pathologist in cereal diseases. An educational training equivalent to that required for the bachelor's degree from a college or university of recognized standing is a prerequisite for consideration for this position. Applicants must have reached their twenty-fifth but not their forty-fifth birthday on the date of the examination. Applications must be received prior to the close of April 21.

March 17, 1913.

OFFICE NOTES

Mr. Charles H. Clark left for the Akron Field Station, Akron, Colo., on the 10th inst.

Mr. P. V. Cardon left for the Nephi Experiment Station, Nephi, Utah, on the 11th inst. Mr. Cardon expects to make official stops en route at Amarillo and Dalhart, Texas, and at Salt Lake City and Logan, Utah.

Mr. C. E. Chambliss left on the 11th inst. for Beaumont and College Station, Texas, and Crowley, La. He will also make an official stop at New Orleans, La., and expects to return early in April.

Prof. L. C. Burnett, Agent in Charge of Cooperative Cereal Experiments at the Iowa Experiment Station, left on the 15th inst., after a stay of about four weeks, during which the manuscript of his portion of the forthcoming bulletin on oat breeding experiments was prepared.

Mr. F. R. Babcock left on the 15th inst. for the Williston Substation, Williston, N. Dak. He will make an official stop at Fargo, N. Dak.

Mr. J. A. Clark, who left for Dickinson, N. Dak., on the 17th inst. will also make an official stop at Fargo.

STATION NOTES

TEXAS:

Amarillo Cereal Field Station. March 8. Mr. Wermelskirchen, who arrived at Amarillo on the 3d inst., reports that the weather continues cold and for the most part cloudy. All plant growth is at a standstill.

KANSAS:

Hays Branch Station. March 11. Mr. Kiene reports his arrival at Hays and says that though low temperatures have been recorded during the winter, the cold spells have been of short duration and altogether the winter has been a mild one. Very little precipitation has occurred; the ground is practically free from frost, and the roads are in fine shape. Very little winterkilling has occurred in the winter emmer and barley and less in the wheat. A plat of Austrian winter peas came through the winter

remarkably well. Preparation for spring seeding will be begun at once.

Mr. Kiene also reports that he found no winter-killing of the crops at Manhattan. The wheat there looks better than at Hays, probably because of better seed-bed preparation and more moisture.

SOUTH DAKOTA:

Bellefourche Experiment Station (Newell). March 2. Mr. Salmon reports his arrival at Newell on February 28 to find a blizzard raging. At date of reporting, however, the snow had about disappeared and the weather was much warmer. The wheat has survived the winter in good shape and some interesting data on winter-survival is expected. Mr. Salmon arrived just in time to take notes on the protection afforded by the snow.

SOUTH DAKOTA:

Highmore Substation. March 10. Mr. Morrison reports that if the warm weather continues for a few days most of the frost will come out. The snowfall for the winter was so light that most of it has disappeared, even in the corn stalks. A large part of the farm is in shape to prepare for seeding. The grains seeded in the cornstalks appear to have survived in good shape. Rye is sending out shoots and will soon be above ground if the weather continues good. Grain in the open fields has been injured badly by rabbits.

WYOMING:

Cheyenne Experiment Farm. March 12. Mr. Jenkin W. Jones reports his arrival at Cheyenne on the 8th inst., since which time good weather has prevailed. Disking will be begun soon. Purchase has been made by the State of a good team of horses.

COLORADO:

Akron Field Station. March 13. Mr. Charles H. Clark reports his and Mr. Clyde McKee's arrival at Akron on the 13th inst. Snow began to fall early the same morning and by one o'clock p.m. about 9 or 10 inches had fallen. The snow was wet and will not drift. Seeding had been started on the 12th, but the snow will interrupt this operation indefinitely. Winter wheat is in good condition.

March 17, 1913.

IDAHO:

Aberdeen Experiment Station. February 24. Precipitation since January 1 has only been .39 inch. The ground thaws out to some extent during the day, but freezes again each night. If continued, this will damage the winter grains.

The average wind velocity for the period from June to October, 1912, both inclusive, was 7.8 miles per hour. There was a frost-free period for the 81 days from June 16 to September 5, 1912. The first killing frost of the fall occurred September 15. The mean daily range for the 7 months from June to December, both inclusive, was 30.43 degrees.

A series of rabbit drives has thus far resulted in the killing of 18,000, more than 4,000 having been killed in one drive. The Oregon Short Line has just completed a rabbit tight fence along its right-of-way through the station.

OREGON:

Eastern Oregon Dry Farming Substation (Moro). March 5. Weather dry and warm during past week. If this condition obtains a few days longer, the field work can be begun.

The Oregon Legislature has appropriated $25,000 annually for college extension work and has also passed a bill providing for the duplication by the State of any amounts of money raised by any of the counties for demonstration farms, or by the Department of Agriculture for experimental or demonstration work in agriculture. It is now expected that when the money for the extension work becomes available, the salary of an assistant in the work at Moro will be paid therefrom.

CALIFORNIA:

Biggs Cereal Field Station. March 8, Weather warm and pleasant, with no rain during the past week. Rain is needed in the Chico district and other sections of the State.

Crop conditions in the immediate vicinity are unusually favorable. The influx of settlers continues. At present there is a great demand for land and prices have risen considerably during the past four weeks. Farmers are making excellent progress in preparation of the land for rice. Large forces are at work, and if the weather continues favorable most of the plowing will soon have been completed. Teams comprising eighty mules are at work in some fields. The Richvale Land Company reports that its colony will seed 3,500 acres to rice this spring. The Moulton Land Company expects to seed 1,000 acres. The total area seeded this spring will be approximately 5,000 acres.

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NEWSLETTER

OF THE

OFFICE OF CEREAL INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U.S. DEPARTMENT OF AGRICULTURE

Volume V.

April 1, 1913.

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April 1, 1913.

NOTICE TO FIELD MEN

Hereafter no letters of explanation will be inclosed with order cards, which will be sent in duplicate, the original to be returned and the duplicate to be retained at the station. Field men are requested to carefully fill the blanks on these cards. Give C. I. numbers wherever possible, and on the line following "Order filled" insert name of town, state, date filled, and initials of person filling the order; for example: "Biggs, Cal.,3/31/13, E.L.A."

OFFICE NOTES

Mr. Wm. A. Taylor is now Chief of the Bureau of Plant Industry, Dr. Galloway having become Assistant Secretary of Agriculture, and Prof. L. C. Corbett has been designated as Assistant Chief.

Dr. Leighty left for Ithaca on the 20th ultimo, for the purpose of studying cooperative cereal breeding experiments on the Cornell University station, conferring with the station officials regarding future work in wheat breeding, and compiling data thereon for publication. He is expected to return in a day or two.

Mr. Warburton leaves today for Ames, Iowa, to supervise the planting of experimental oat plats and assist in preparing for publication data on results from oat experiments.

A manuscript entitled "Oat Breeding: Tests of Selections from Hybrids and Commercial Varieties", by Mr. C. W. Warburton of this Office; Prof. L. C. Burnett of the Iowa Experiment Station, and Dr. H. H. Love of the Cornell University Experiment Station, was transmitted to the Chief of Bureau on March 29 for publication as a Bureau Bulletin.

A manuscript entitled "Cereal Experiments at the Nephi (Utah) Substation", prepared by Mr. P. V. Cardon for publication as a Bureau Bulletin, will be transmitted to the Chief of Bureau on the 2d instant.

A short paper entitled "Feterita", by Mr. H. N. Vinall of the Office of Forage Crop Investigations, and Mr. C. R. Ball of this Office, was submitted today for publication as a portion of a Circular in the Bureau Series.

STATION NOTES

LOUISIANA:

Crowley Rice Experiment Station. Mr. Jenkins reports his arrival at Crowley on March 19.

TEXAS:

Amarillo Cereal Field Station. Mar. 27. Weather during March has been very cold. High winds have prevailed almost constantly since the 13th. Frost has occurred nearly every night, the thermometer registering as low as 8 degrees on the morning of the 27th. About 4 inches of snow fell on the 26th, but is disappearing rapidly. Considerable damage to the winter grain plats has resulted. The blowing of the soil was more marked at the south end of the farm, on the D.L.A. plats, than on the varietal plats on the west side, largely because the former have been longer under cultivation. Practically all of the spring cereal seedings have been made with the exception of a portion of the nursery and the later date-of-planting tests.

Mar. 29. Mr. Wermelskirchen reports that the nursery and field plats in the B,C,D and E series have been sown and that the planting of the head rows in Series A is in progress.

The cooperative work conducted on this station by the Office of Forage Crop Investigations is to be greatly expanded. From 85 to 100 tenth-acre plats will be devoted to the work this year. These investigations will be in direct charge of Mr. A. B. Cron of that Office, who arrived at Amarillo on Mar. 19.

The Biophysical Laboratory, in charge of Dr. Briggs, will begin at the station this year an extensive series of transpiration experiments with plants grown in large metal cans under controlled conditions, and will place a man in charge of the work. Materials for these experiments are being received.

Rice Farm (Beaumont). Mar. 25. Heavy rainfall and general bad weather the past month has delayed the rice plantings throughout this section. Corn, oats and sweet clover have been sown on the rotation plats. Japan clover, Colorado grass and Guinea grass have been added as spring plantings to the pasture mixtures, and 1 1/2 acres of Japanese sugar cane have been planted for station feed. About 10 varieties of fruit trees have been set out as a test orchard and are at present in excellent condition. Shade trees have been planted, and the lawn is being graded.

The extra early seeding of rice for the purpose of getting the high prices paid for the first of this grain to appear on the market is being discouraged by the Southern Rice Growers Association because of the continued unfavorable weather.

Mr. Chambliss was at the station on Mar. 16, 17, and 18. He then left for Crowley, and is expected to return to Beaumont on the 27th.

KANSAS:

Hays Branch Experiment Station. Mar. 15. A blizzard has been raging for two days, but the wind is subsiding and the temperature rising. Work in the field had to be suspended, but a few days labor will put the ground in condition for seed.

Mar. 22. No precipitation this week, and the snow of last week has been blown off the field. Early this week a high wind from the south blew the summer-fallowed soil to such an extent that immediate use of the cultivators was necessary. A half day's work put the soil in fairly good condition to withstand the wind. Rain is badly needed. Precipitation for the year has been only .55 inch. Temperature for March: Minimum, 1 degree; Maximum, 71 degrees. Ground has been in condition for planting for some days, but low temperatures and high winds prevent.

Mar. 28. Very high winds prevailed on the 23d but no damage was done at the station. High winds and cold weather obtained during the past week, but no precipitation occurred. Temperature is now higher, but wind still continues. Rain clouds are gathering, and the prospects for precipitation are good. On the 24th, spring barleys and wheats were seeded; also certain of the rate- and date-of-seeding tests of the Burt oats.

SOUTH DAKOTA:

Highmore Substation. Mar. 17. The weather is again cold. A blizzard occured on Mar. 14, and about 6 inches of snow fell, but was blown from the field, the drifts in the standing cornstalks being about 16 inches deep. The rough plowed ground held no more snow than that levelled after plowing. Work is progressing nicely.

NORTH DAKOTA:

Williston Substation. Mr. Babcock reports his arrival at the station on Mar. 19, to find very cold weather and 6 inches of snow.

Dickinson Substation. Mar. 25. Mr. J. A. Clark reports his arrival at the station on the 24th to find snow a foot deep on the level. Temperature on the night of the 24th was 16 degrees below. A new Van Brunt grain drill has been purchased for use on the station, and a new hand plow for nursery work is being ordered.

COLORADO:

Akron Experiment Farm. Mar. 20. The snow which began to fall on the 13th, and amounted to 11 inches in all, was blown about by unusually high winds, and drifted so badly as to blockade trains for two days. The men at the station were forced to find refuge in Superintendent Grace's house. The 15th, 16th and 17th were spent in clearing the snow from the farm buildings, but the men were forced to again desert the office on the 20th because of the storm. The machinery shed was almost completely filled with snow.

Mar. 25. Weather has been stormy for past three days and snow is falling today. The prospects are that spring will be quite late.

UTAH:

Experiment Station (Logan). Mar. 25. Mr. Cardon reports that about 2 feet of snow has fallen since his arrival at Logan, on the 18th. He expected to talk on the 25th before the Agronomy Seminar at the college regarding some phases of the work of the Department of Agriculture, and on April 15th expects to present before the Utah Academy of Science a paper on the progress of the cereal work at Nephi. Mr. Cardon expected to leave Logan for Nephi on the 27th.

IDAHO:

Aberdeen Experiment Station. Mar. 24. Weather is very cold, and it has been impossible to do any spring seeding to date.

Mar. 27. The weather turned warmer for a short period and many farmers began field work. Snow and cold weather is again being experienced, however, and the farmers have had to cease operations. Preparations are being made to start seeding on the station at the first favorable opportunity.

OREGON:

Eastern Oregon Dry Farming Substation. (Moro). Mar. 25. The first two weeks in March were warm, maximum temperature being usually about 50 degrees and rarely below 30. From Mar. 18 to date, the weather has been much colder. On the 24th, the minimum temperature of 9 degrees was recorded, which is within 4 degrees of the coldest temperature recorded this year. On the 21st, the maximum temperature was only 29, and the minimum 17 degrees. On March 1, 1912, the lowest temperature for the year, 20 degrees above, was recorded. The lowest for 1911, 11 degrees above, was also recorded on March 1.

The winter precipitation failed to penetrate the ground very deeply, and there has not been sufficient moisture since to be of any service. The greatest precipitation for any 24 hours this month was .10 inch. Total precipitation for March, to date, .29 of an inch.

Winter grains have made little if any growth this month. On many of the plats the plants are not yet above ground. Prospects for good crops of winter grains are very discouraging and many farmers have already begun to reseed to spring wheat. Field work was started on March 5, and since then all winter grains have been harrowed and last year's summer fallow double-disked. Stubble ground has been disked and plowed. Twenty plats of the varietal test of field peas have been seeded and 6 acres of field peas planted for pasture.

CALIFORNIA:

Biggs Cereal Field Station. Mar. 15. Weather during the week has been very favorable for field work. Practically all the rice land has been plowed. The farmers now desire rain to assist in the preparation of a seed-bed for the rice. The Canal Company has begun the construction of 25 miles of ditch on the land of the Richvale colonies. Considerable land has changed hands lately, and settlers still continue to come. According to the Biggs Chamber of Commerce, the value of last year's rice crop in the Biggs section was $50,000, 850 acres having been sown to rice, with a yield of 50 sacks to the acre on the Balfour-Guthrie ranch--the largest yield recorded.

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NEWSLETTER

OF THE

OFFICE OF CEREAL INVESTIGATIONS,

BUREAU OF PLANT INDUSTRY,

U. S. DEPARTMENT OF AGRICULTURE.

Volume V.

APR 16

1913

April 15, 1913.

CORRECTION.

The extensive series of transpiration experiments to be inaugurated at the Amarillo Cereal Field Station this spring are to be conducted cooperatively by the Office of Alkali and Drought-Resistant Plant-Breeding Investigations and the Biophysical Laboratory. In the Newsletter of this Office dated April 1, this project was inadvertently accredited to the latter agency alone.

OFFICE NOTES.

Field men are requested to thoroughly familiarize themselves with the Bureau Interpretation of Fiscal Regulations, a copy of which was sent to each station some time ago. This will be of material assistance in making up accounts, hiring labor, etc.

A manuscript entitled "Cooperative Barley Investigations in Minnesota", by Prof. C. P. Bull, of the Minnesota Experiment Station, was submitted to the Chief of Bureau early in March for publication.

On April 8 a manuscript entitled "The Morphology of the Barley Grain With Reference to its Enzyme-Secreting Areas", by Mr. H. V. Harlan of this Office and Dr. Albert Mann of the Office of Crop Technology, was submitted to the Chief of Bureau for publication.

Farmers' Bulletin 534, entitled "Durum Wheat", by Messrs. Salmon and Clark was in galley-proof early in the month, and it is still hoped that this Bulletin will be ready for distribution in time to be of benefit in sections where seeding may have been delayed on account of the lateness of the season.

William G. Bengel was appointed Messenger in this Office on Mar. 26, to fill the vacancy caused by the resignation of Miller O. Yates on Mar. 25.

Miss Jane B. Taylor was appointed stenographer and clerk in this Office on Apr. 1, 1913, to fill the vacancy caused by the transfer of Miss M. J. Schwab, on Mar. 28, to the Office of Drug Plant Investigations.

Mrs. Andrean S. Stratton, Clerk in the Geological Survey, was transferred to this Office on Apr. 11.

Dr. Leighty returned from Ithaca on Apr. 3, after studying the cooperative cereal work now in progress, compiling data thereon for publication, and planning future experiments in cereal breeding.

Miss Hudson returned to the Office on Apr. 7, after a severe illness of about three weeks. With the assistance of Mrs. Stratton, the accumulation of financial work will be rapidly disposed of.

Mr. Chambliss returned on Apr. 10, after having visited the Rice Stations and other points in Texas and Louisiana.

FIELD NOTES.

VIRGINIA:

Arlington Farm Cereal Work. Apr. 15. Heavy rains of the past week have seriously delayed the seeding of spring rye and emmer. Spring seeding of oats was completed on Apr. 2. All fall-sown cereals came through the winter in excellent condition. The field plats of Arlington Awnless and Virginia Hooded barleys are rapidly heading, as are also several of the earlier ryes.

LOUISIANA:

Crowley Rice Experiment Station. Seeding of rice was begun during the first week of April.

TEXAS:

Beaumont Cooperative Rice Experiment Station. Apr. 1. Excellent weather conditions now obtain, and the ground is in excellent shape for field work. Excessive rain and continued cold previously obtaining have necessitated the reseeding of corn and oat plots, which made a very poor stand. Planting of rice in the various experiments will begin about the middle of April. The nursery rices will be sown in seed boxes.

Amarillo Cereal Field Station. Apr. 5. Maximum temperature the past week, 86 degrees; minimum, 24. Blowing of the soil has somewhat damaged the winter nursery. Seeding of spring nursery was completed Mar. 31. Some of the early-

seeded spring wheats have germinated and pushed through the soil, but it is doubtful if any further growth will take place until more rain falls.

Apr. 10. The experiments of the Office of Forage Crop Investigations have been expanded to cover 99 plats this year. Mr. Vinall of that Office is at the station assisting Mr. Cron, who is in charge of the work.

Apr. 12. Range in temperature for past week has been from 21 to 80 degrees. High winds prevailed on the 10th and 11th, but at present the weather is warm and pleasant. Those of the spring grains that have germinated have made good growth. A good rain is needed.

KANSAS:

Hays Branch Station. Apr. 3. Weather is cold. Still no precipitation, but rain is threatened.

Apr. 5. No precipitation to date. Weather fairly pleasant, though somewhat windy. Seeding of varietal plats and second date-of-seeding of oats has been completed. Mr. Vinall of the Office of Forage Crop Investigations is at the station assisting Mr. Getty in the forage work. Prof. Call visited the station Mar. 31, and planned additional experiments in soils for this season.

Apr. 12. A precipitation of 1.17 inches has occurred, but weather is now clear and soil in good condition for planting. Seeding of the pedigreed oats from Arlington Farm was completed today.

IOWA:

Experiment Station: (Ames) Apr. 3. Mr. Warburton reports his arrival at Ames on Apr. 3, during a shower of rain which will delay preparation of ground for spring seeding.

Apr. 4. Ground is covered with about 2 inches of snow.

Apr. 8. Continued cold rain since the 6th has prevented seeding, and it is feared that the weather will not moderate sufficiently to put the ground in shape for planting next week.

Apr. 10. Still raining.

Apr. 12. Sun shone today for the first time since the 6th. Weather is now clear but rather cold for this time of

the year. A light snow fell on the 11th, but soon melted. It is believed that the present good weather will continue for a few days, and that the temperature will rise. It is hard to tell, however, when work in the field can be begun. The preparation of the manuscript for a bulletin on oats is progressing nicely.

SOUTH DAKOTA:

Bellefourche Experiment Farm (Newell). Apr. 3. Bad weather has prevailed for several weeks. Snow has practically disappeared, but no field work can be done for at least a week. Soil is well supplied with moisture, and the grains should get an excellent start in growth as soon as planted. Apparently, all the winter wheat has survived, but this cannot yet be definitely determined.

Highmore Substation. Apr. 1. Weather conditions favorable for field work. Soil contains sufficient moisture to facilitate rapid growth of plants. The first of the date-of-seeding plantings was made today, but it is thought best to delay general plantings for about two weeks. Most of winter grain seeded among cornstalks is in good shape. Winter rye is green, and does not appear to have suffered from winterkilling.

NORTH DAKOTA:

Dickinson Substation. Apr. 3. Warm weather for past few days has melted most of the snow. Apparently wheat in the plats and nursery has practically all winterkilled, with the exception of that seeded in standing corn, where it is probable that there will be some survival. It is hoped that a few plants in the nursery will be saved, but all of the hybrids and selections are apparently dead. Among the variety test plats of wheat there some live plants in a row of Buffum's No. 17 and a row of Kharkov.

Apr. 11. The winterkilling is not so complete as was at first thought. It is expected that spring wheat will be planted early next week.

Williston Substation. Mar. 29. Weather is moderating considerably. Most of the snow has disappeared, and if warmth continues a few days the ground will be in condition to work. Nothing definite can be said as yet with regard to survival of winter grains. Preparation for spring seeding is progressing, and there is ample moisture to insure excellent germination.

Apr. 2. Mr. Babcock reports that there is still some ice in the Missouri river; that the river has reached its highwater line, and that the Williston pumping plant, supplying water to the city, is flooded and cannot be operated.

Apr. 12. Mr. Babcock reports that there have been but two nights since his return to the station when the temperature was above freezing, but that the weather is moderating considerably. The first field work was done on the 11th instant. Nursery plats are now ready for planting, which will be begun early next week, weather permitting. The soil contains sufficient moisture to insure a high percentage of germination.

Apparently, there has been little winterkilling of fall-sown wheat. However, as only the past two or three days have been warm enough to permit growth, the condition of this crop cannot be definitely determined.

Floods from the Missouri damaged only those farming lands adjoining the river.

MONTANA:

Judith Basin Substation. (Moccasin) Apr. 8. Spring weather obtains for the first time this year. The snow has all disappeared, but there is still from 10 to 12 inches of frost in the ground. The extreme moisture of the soil will prevent seeding much earlier than May first.

WYOMING:

Cheyenne Experiment Farm (Archer). Apr. 2. Weather is cold and windy. The double disking which is in progress is putting the soil in fairly good condition. Practically all of the seed for spring planting has arrived. Mr. J. S. Cole of the Office of Dry Land Agriculture has visited the station and selected the area for the D.L.A. plats, and will later send a man to help with the spring work thereon.

COLORADO:

Akron Experiment Farm. Apr. 9. Snowfall and high winds obtain today, but the indications are that the storm will have subsided by tomorrow. No field work will be possible this week. Seeding of the wheat varieties was completed on the 5th.

UTAH:

Nephi Substation. Mar. 29. Mr. Cardon reports his arrival in Nephi on Mar. 28, to find snow on the ground, but says it is rapidly disappearing and prospects are good for beginning work in a few days. Farmers in town report that the winter has been long and cold. There has been little snow on the Levan ridge prior to this month.

Mar. 31. Winter wheat, barley and emmer made a good stand on most of the plats, but that of the winter oat is very poor and it is probable that the plats of this variety will require reseeding. All the winter crops have been seriously affected by the cold, especially the oat which has almost completely winterkilled. Some of the oat plants were in the second-leaf stage at the time of winterkilling. Wheat and emmer are now in the second-leaf stage, but the barley plants have just put forth the first leaf.

These conditions may be due to the long delay in planting last fall because of the dry weather, the consequent retarded growth of the plants in the fall, and the following cold winter with insufficient snowfall to protect the plants. Growth was apparently resumed in February, but the plants were again subjected to freezing weather in March, which probably accounts for the brown tips of the leaves.

All the crops in this section are in about the same condition as those on the station. The present delightfully warm weather, however, will undoubtedly facilitate rapid growth. Soil on the ridge is still very wet, which will delay planting for some days.

There is a concerted movement among the "dry-farmers" of the State to establish a pure-seed headquarters in each county. Mr. Cardon has agreed to lend all possible assistance. It is confidently expected that great benefit to the farmers will result.

IDAHO:

Aberdeen Substation. Apr. 4. Meteorological readings were begun at the station on April 1. It is hoped that the weather next week will permit planting.

CALIFORNIA:

Biggs Cereal Field Station. Mar. 31. Weather is very pleasant. Rainfall has occurred on seven successive days, the precipitation for the period Mar. 17 to 23 being

more than 3 inches. The rain was badly needed, although the crops have suffered little if any for lack of it. Crop conditions in this section of the Sacramento Valley are very good, while in this immediate locality they are above normal. The light winter rainfall is conducive to good grain crops on the adobe land.

Work on the station is progressing nicely. Rice plats are ready for seeding, but at present the ground is not dry enough to permit it. About 3 acres of alfalfa have been sown. During the past week plantings have been made of trees and shrubbery obtained from the Plant Introduction Garden at Chico. Some Cooperative corn experiments are to be begun on about a half-acre.

Cereal work at Chico is in good condition.

Apr. 4. The rainy weather now obtaining is interfering with rice seeding. The planting of rice which was planned for Mar. 15 had to be postponed until Apr. 2. Rain interrupted the operations on that day and has since continued. Unless the rain interferes, seeding of rice by the planters will be done much earlier this year than last. Indications are that about 6,000 acres in the Sacramento Valley will be seeded to rice.

OREGON:

Eastern Oregon Dry-Farming Substation. (Moro).
Apr. 8. Since Mar. 25, the precipitation has been .89 of an inch. Of this, .25 fell on Mar. 29 and .23 on Apr. 4. As a result, the ground is in much more favorable condition for crop growth. Seasonable temperature has prevailed mostly during this period, the lowest temperature having been 29 degrees, on Apr. 2, and the highest, 59 degrees, on Apr. 3.

The rain and warm weather have started growth of the winter wheat, but barleys and oats have not yet come above ground, and it is feared that the crop of these latter varieties will be very short. The stand of Winter emmer is thin, but the crop seems all right otherwise. Wire worms are doing considerable damage to winter grains, which are at just the stage of growth when most damage can be done by these pests.

Seedings have been made of spring wheat, oats, barley, emmer and rye. If weather continues favorable this week, all small grains will be seeded. Twenty-five new varieties of field peas from the Office of Forage Crop Investigations have been seeded.

NEWSLETTER

OF THE

OFFICE OF CEREAL INVESTIGATIONS,

BUREAU OF PLANT INDUSTRY,

U. S. DEPARTMENT OF AGRICULTURE.

Volume V.

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APR 26
1913

April 26, 1913.

OFFICE NOTES.

Mr. Potter left on Apr. 19 for an extensive field trip in the interests of cereal pathology. He will visit Amarillo, Tex. and Manhattan, Kans., and possibly points in Iowa, Wisconsin and South Dakota, returning to Washington in the late summer or early fall.

The Newsletter of the Office of Cereal Investigations will hereafter be issued on Saturday of each week during the cropping season. It is desired that a weekly report be mailed every Saturday night from each station for inclusion in the Newsletter of the following week.

B. P. I. Bulletin 283, entitled "Cereal Experiments in the Texas Panhandle", by Messrs. John F. Ross and A. H. Leidigh, is now in page proof, and will soon be ready for distribution.

A short paper entitled "Feterita, a New Variety of Sorghum", by Mr. H. N. Vinall of the Office of Forage Crop Investigations, and Mr. Carleton R. Ball of this Office, appears in "Miscellaneous Papers", B. P. I. Circular 122, issued under date of April 19, 1913.

Memorandum Re Attendance of Department Officers and Employees at Meetings.*

Attention is hereby called to the following clause in the Act making appropriations for this Department for the fiscal year ending June 30, 1914:

> "That nothing contained in the Act making appropriations to provide for the expenses of the Government of the District of Columbia for the fiscal year ending June thirtieth, nineteen hundred and thirteen, and for other purposes, approved June twenty-sixth, nineteen hundred and twelve, shall be so construed as to prohibit the payment from the appropriations for the Department of Agriculture of expenses incidental to the delivery of lectures, the giving of instruction, or the acquiring of information at meetings by its employees on subjects relating to the work of the Department authorized by law."

In this and other legislation recently enacted, Congress evidently desires to fix strict limits for the expenditure of public funds for attendance at meetings, but recognizes that this Department has a peculiar mission to acquire and disseminate agricultural information. The Secretary being desirous that the policy of the Department and the action of its officers and employees in this matter should be in strict conformity with the letter and spirit of the law and conducive to the best interests of the public service, makes the following statement on this subject:

Authorizations for attendance at meetings will be confined chiefly to meetings of farmers, live stock growers and others interested in agriculture, (including horticulture and forestry), assembled for the purpose of receiving information or instruction from employees of the Department on subjects relating to the work of the Department authorized by law.

Authorizations to attend conventions of scientific societies or associations or to give addresses at schools, colleges, and other educational institutions will be given only to a limited extent and for the purpose of acquiring or giving information on subjects directly relating to the work of the Department authorized by law. Each case will be considered on its merits with special reference to the work on which the employee concerned is engaged.

All authorizations to attend meetings or other gatherings will be given by the Secretary on recommendation of the Chiefs of Bureaussand independent offices, except that said Chiefs may authorize the attendance of their field employees at meetings occuring in the course of their regular official travel when such attendance will be in the direct interest of their work and for the purpose set forth in the aforesaid law; and in the case of each authorization of this kind, a memorandum indicating the action and reasons therefore should be promptly sent to the Secretary's office.

* Department Memo, No. 8, Apr. 21, 1913.

FIELD NOTES.

LOUISIANA:

Crowley Rice Experiment Station. Apr. 13. High winds prevailed during the first week of April, causing the plowed land to become too hard for obtaining a good seedbed, and preventing the planting of nursery rices because of the danger of mixing varieties. A much-needed rain fell on the 9th, retarding farm

operations for a while. Frost occured on the 12th. Weather since the rain has been clear, but too cold to promote plant growth and seed germination. Half of the rice nursery was planted on the 12th, and it is expected to complete this on the 14th. Lack of sufficient horse power may delay field plantings. Considerable progress in this locality has recently been made in the use of traction engines for preparing rice land. It is said that about 20 are now in use in this vicinity, the gasoline and oilpull types being the most common.

Apr. 20. Good weather has prevailed during the past week. Seedings of the nursery and increase plats are completed. The nursery seedings are germinating well. All seedings will probably be completed next week. Many farmers report poor stands of early rice sowings and that the plants are dying before they emerge above ground. On inspection, it appears that insects have damaged some, while others appear diseased.

TEXAS:

Beaumont Cooperative Rice Experiment Station. Apr. 12. Mr. Johnston reports that the rice millers and the Rice Growers' Association claim that the reduction in tariff on rice will reduce the acreage by at least one-half.

Apr. 19. Continued dry, hot weather and poor soil condition will necessitate considerable reseeding of rice. Messrs. Goodrich and Willard, of the Office of Farm Management, visited the station today.

Amarillo Cereal Field Station. Apr. 19. The much-needed precipitation has not yet occurred. Temperature for the past week has ranged from 29 to 89 degrees. The last sowing in the date-of-seeding tests of spring wheat and oats were made on the 15th.

KANSAS:

Hays Branch Experiment Station. Apr. 19. No precipitation has occurred during the past week, and conditions have been favorable for field work. Nursery plantings have been completed. As a result of the rains during the previous week the crops have made good growth. Spring grains are up and have made a fair stand. General farm work is up to date. Indications are that precipitation and cooler weather will obtain for a few days.

IOWA:

Experiment Station. (Ames) Apr. 19. Mr. Warburton reports the completion of the nursery seedings of oats being grown for classification and herbarium purposes, and that he expects to leave on the 21st and arrive in Washington on the 26th, after taking two days leave en route.

COLORADO:

Akron Experiment Farm. Apr. 19. Seeding was resumed on the 17th, and varietal sowings of oat and barley completed. The nursery will be planted next week if weather continues favorable.

Apr. 21. Considerable rain and some hail fell on the 19th, precipitation at the station measuring .87 of an inch. Strong winds from the south yesterday and this morning have brought more rain which will probably result in another half-inch or more of precipitation. Spring wheat is just above ground, some of the earlier germinating varieties making quite a showing. Winter grains all appear to be in good shape with the exception of Black Winter emmer, but it is expected that this will make a fair stand. A small increase plat of Berdiansk wheat was the only winter grain to entirely winterkill in the field trials. Nursery seeding is delayed by the weather.

WYOMING:

Cheyenne Experiment Farm (Archer). Apr. 12. Storms and cold weather have prevented field work the past week. Disking, however, has been completed, and about five days' harrowing will put the land in condition for seeding.

Apr. 18. Mr. J. S. Cole of the Office of Dry Land Agriculture, and Mr. W. W. Burr of the North Platte Substation, Nebr., expect to arrive at the station on the 20th. The plats to be devoted to the work of the Office of Dry Land Agriculture are ready for seeding, which will probably be begun on Mr. Cole's arrival.

SOUTH DAKOTA:

Bellefourche Experiment Farm (Newell). Apr. 12. Work on the station has been considerably delayed by severe snow storms and by cool weather which prevented the melting of the snow and drying of the ground. This abundant moisture, however, will doubtless facilitate rapid growth of spring-sown seed on the arrival of warm weather.

Winter wheat has started growth. Under favorable moisture conditions, it will probably do better than spring wheat. Even the least resistant strains of wheat appear to have survived the winter perfectly. Volunteer spring wheat on some of the irrigated plats has also survived the winter, and it is feared will interfere with some of the experiments being conducted under irrigation by other Offices.

Apr. 15. Seeding was commenced today, but was interrupted by high winds. It is hoped that the seeding may be continued tomorrow. Rain is threatened.

Apr. 19. Favorable weather during the week allowed seeding of spring grains as well as considerable hand work in the nursery. It is expected that increase rows and irrigated grain-plats will be seeded the coming week. Some winter wheat plats and rows have recently been damaged by blowing of the soil. Boswell's Winter oat appears to have been entirely winterkilled, though volunteer spring grain in equally exposed locations survived to considerable extent. Winter emmer, C.I. No.2337, survived well, but with reduced vigor. Buffum's Winter emmer in row tests appears to have survived slightly better than C.I. 2337. The stand of all emmer is poor.

Although the winter as a whole was mild, last year's growth on fruit and shade trees was killed. This condition apparently exists in the eastern part of the State also. Hardy shade trees, such as ash, have been damaged. Causes for these conditions are unknown, unless it may be that heavy rains last fall prevented the normal ripening of the wood. It is interesting to note that a like effect has not been produced in the cereals.

Highmore Substation. Apr. 14. Two snow storms occurred last week, between 6 and 7 inches of snow falling. This has melted and furnished sufficient moisture to give the spring grains a good start in growth. General seeding has been begun, and will be continued as rapidly as weather conditions permit. Everything is in readiness.

Apr. 19. The past week has been very favorable and the seeding of wheat, oats and barley in tenth-acre and hundredth-acre plats is practically completed, only a half acre of barley now remaining to be sown. It is hoped that the weather for the coming week will permit continuation of the seeding. The early seedings of wheat, made on April 1, are now above ground.

NORTH DAKOTA:

Dickinson Substation. Apr. 19. Weather the past week has been mild, with no rain. Varietal seedings in field plats of wheat, oats and barley have been completed. All spring work is progressing rapidly.

Williston Substation. Apr. 19. Weather during the past week has been favorable for seeding. Maximum temperature, 89 degrees; minimum, 24 degrees. For several days during this period high winds prevailed, and on two days the temperature was quite high for this season of the year. Although the soil has dried very rapidly, it still retains sufficient moisture to insure germination. The ground has thawed to a depth of about two feet. Nursery sowings are practically completed, and field plats will be seeded next week.

UTAH:

Nephi Substation. Apr. 13. A little snow and sleet occurred during the first three days of April, but since then the weather has been clear and cold. At night the temperature has been as low as 25 degrees, and during the day was seldom above 50 degrees. The extremely cold weather which has obtained until recently has hindered growth of the crops, and the crust on the ground has been getting thicker and harder, so that the late-seeded fall grains are having great difficulty in getting above ground.

All nursery and plat seedings of spring cereals were completed on the 13th. Several thirtieth- and fortieth-acre plats have been seeded to pure-line selections of durum wheat and oats, and the regular spring varietal test plats of these grains have also been sown.

Apr. 22. A telegram received from Mr. Cardon states that burglars broke into the station office on the night of the 17th and stole a kodak outfit belonging to the Department and several tools which were the property of the State, but that the men and property were being held at Provo.

CALIFORNIA:

Biggs Cereal Field Station. Apr. 12. Rice seeding is progressing nicely, only about two more days' work being necessary to complete seeding of plats and nursery. Several farmers have begun to sow rice, and about 1,000 acres are already seeded. The acreage sown to rice this season will depend to some extent upon the condition of the weather for the next few days.

Apr. 14. Rain which has fallen all day is not welcomed by the farmers. The rice seeded at the station on the 2d is sprouting and will soon be above ground. The nursery is being seeded in duplicate rows, with two grains at intervals of 6 inches to insure a good stand. The grains are dropped one-half inch apart so that they may be accurately thinned. Newly introduced varieties are being seeded in 17-foot rows, with 225 grains to the row.

Mr. Adams reports (Apr. 14) that he visited the Sutter Basin project last week in company with Messrs. Gerber, Eder and Johnson, and found that they had about 300 acres in excellent preparation for seeding to rice and intend to prepare as many more acres as possible. He thinks theirs is the best seedbed of any commercial field he has ever seen. Their land being very level, they were enabled to run large square checks. Four wells were being drilled for irrigation, and two more are to be drilled, and no trouble is anticipated in holding the water on the land. Mr. Adams was requested to render assistance to the extent of an occasional visit during the growing season.

OREGON:

Eastern Oregon Dry-Farming Substation. (Moro). Apr. 14. Field sowings of small grains are completed. Nursery and potato plantings are being made this week.

NEWSLETTER

OF THE

OFFICE OF CEREAL INVESTIGATIONS,

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BUREAU OF PLANT INDUSTRY,

U. S. DEPARTMENT OF AGRICULTURE.

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MAY 3
1913

May. 3, 1913.

PARCELS POST *

> "In the opinion of the Attorney General, dated February 28, 1913, it is held that since the Act of June 26, 1906, permits the mailing under the penalty privilege of official matter which 'would be entitled to admission to the mails under laws requiring payment of postage,' and since 'fourth-class mail matter,' as defined by the parcel post law of August 24, 1912, is admissible to the mails to the extent of eleven pounds in weight, the limit of weight of such official matter as partakes of the characteristics of 'fourth-class mail matter' is by that Act increased to eleven pounds. It is, therefore, permissible, under the law, for an executive department or officer of the Government to send in mails, free of postage, under a penalty envelope or label, official matter partaking of the characteristics of 'fourth-class mail matter', not exceeding eleven pounds in weight."

From this it will be noted that official matter partaking of the nature of fourth-class mail matter may be sent by the several departments, under penalty envelope or label, not exceeding eleven pounds in weight.

* B.P.I. Memo., Apr. 25, 1913.

OFFICE NOTES.

Mr. Harlan left on Apr. 30 on a field trip in connection with barley investigations. He will visit points in Minnesota, Wisconsin, and the Dakotas, and will probably not return before the end of the fiscal year.

Mr. Rothgeb left on May 1 for the Amarillo Cereal Field Station, Texas, to prepare and plant the grain-sorghum sections.

B.P.I. Bulletin 269, "Experiments in Wheat Breeding: Experimental Error in the Nursery and Variation in Nitrogen and Yield", by E. G. Montgomery, Collaborator with this Office, was issued Apr. 24.

FIELD NOTES.

VIRGINIA:

Arlington Farm Cereal Work. Apr. 30. Most of the varieties of rye and barley are in head, and the earliest varieties of oats and wheat are beginning to head.

LOUISIANA:

Crowley Rice Experiment Station. Apr. 26. Weather continues too cool to promote crop growth, due to cold north winds. Rain fell continuously from the morning of the 24th until noon of the 25th, the precipitation being over 2 inches. No planting was done on the farm this week. Meteorological data sent in by Mr. Jenkins show a total precipitation of 53.27 inches at Crowley for the year 1912.

Texas:

Beaumont Cooperative Rice Experiment Station. Apr. 26. Rain fell on the 24th, resulting in cooler weather. The spell of hot, dry weather, which will necessitate reseeding of rice, obtained from Apr. 9 to 24.

Amarillo Cereal Field Station. Apr. 26. The long drouth is at last broken. Total precipitation for the past week, 1.67 inches. Moisture has penetrated the soil to the depth of a foot. It is hoped that this will make possible the working of the sod which was plowed deep last February. Temperature has ranged from 32 to 75 degrees. Dr. Shantz, of the Office of Alkali and Drought-Resistant Plant-Breeding Investigations, was at the station on the 24th, in connection with the extensive series of transpiration experiments to be cooperatively conducted by that Office and the Biophysical Laboratory. This work will be in charge of Mr. Homer Martin.

KANSAS:

Hays Branch Station. Apr. 23. Rain began falling on the night of the 22d, and still continues. The weather is cool. Spring grains are up, have made a fair stand, and are looking well.

Apr. 26. Rainfall for the past week was 1.59 inches. Weather is warmer than during first part of the week, and crops are making rapid growth, especially wheat seeded on fallowed

ground. Corn and sorghum varieties are being prepared for planting, which will be begun about Apr. 29 if the weather is favorable.

COLORADO:

Akron Experiment Farm. Apr. 28. The past week was cold and windy with occasional light rainfall and snow flurries, until the 26th, when the weather moderated. Maximum temperature of 78 degrees for week ending Apr. 28 occurred on the 27th; minimum, 27 degrees, on Apr. 24. Greatest daily range, 36 degrees, (from 68 to 32 degrees) occurred on the 22d. Precipitation for the week ending Apr. 28, .36 of an inch. Seeding of the nursery, which has been delayed by weather conditions, was begun on the 28th. Spring wheat and emmer in the field plats are above ground. Winter grains look well, both on the station and neighboring farms.

WYOMING:

Cheyenne Experiment Farm (Archer). Apr. 26. Weather for the past week has been cold and windy, but seeding has progressed in spite of these conditions. Little if any seeding was begun, however, in this locality, until the past week. Tenth-acre plats have been seeded to wheat and oats; also rate-of-seeding tests with these crops. Messrs. Cole and Burr of the Office of Dry Land Agriculture arrived at the station early in the week, Mr. Burr remaining until the completion of the seeding of their rotation plats, on the 24th, to wheat, oats, peas and barley.

SOUTH DAKOTA:

Bellefourche Experiment Farm. Apr. 26. Weather during the past week has been favorable for field work. Average temperature has been low, delaying germination of spring grains. With the seeding of irrigated plats on the 24th, all plat seedings were completed. Nursery rows of oats and wheat are yet to be planted. Winter wheat is making rapid growth. The plants are strong and vigorous, and the stand good.

Highmore Substation. Apr. 26. Weather during the past week has been favorable for field work. Nursery seedings are being pushed as rapidly as possible, and the sowing of wheat, oats, barley, emmer and rye will probably be completed next week, if the weather continues favorable.

Experiment Station (Brookings). Apr. 21. Prof. Champlin reports his departure on this date for Highmore, and he expects also to visit Cottonwood and Eureka. He states that nearly all winter wheat and rye at this station came through the winter in good shape. Two plats were killed by freezing. Clovers and alfalfas appear to be in good condition. A new station at Vivian, S. Dak., is being established this spring by the State. This will probably be more in the nature of a model farm, than a station conducted for strictly experimental work.

NORTH DAKOTA:

Dickinson Substation. Apr. 28. Cold, windy weather prevailed last week. Precipitation for the week, .10 of an inch. The wind greatly hindered the seeding of the nursery, only part of one day having been devoted to this work and but 280 rows seeded.

Williston Substation. Apr. 26. Weather for the past week has been cold, with no precipitation. North and northwest winds have prevailed most of the week. Minimum temperature of 13 degrees occurred on the 26th; maximum of 80 on the 21st. Field plats of wheat, oats, barley, emmer, rye and spelt were seeded this week. The nursery seedings, with the exception of the flax and proso varieties, are completed. Winter wheat sown in corn plats has survived the winter with a good stand. Nursery head and rod rows seeded in stubble were completely killed except those which were covered with straw.

MONTANA:

Judith Basin Substation. Apr. 28. Weather for the past two weeks has been quite dry, with considerable wind. Only .75 of an inch of precipitation has occurred during April, which is nearly an inch below normal. Spring-plowed ground is beginning to show the need of rain. Winter wheat is now growing rapidly. Some winterkilling has occurred, especially among the late-seeded strains. Very little winterkilling of wheat occurred in the nursery. Spring wheat and barley varieties have been seeded. If weather continues favorable, the nursery seedings will be completed this week.

IDAHO:

Aberdeen Substation. Apr. 23. Weather remains very cold and at times disagreeable. The high wind which prevailed on the 22d overturned small buildings and otherwise did consid-

erable damage. Four days in the past week the temperature ranged from 10 to 20 above zero in the early morning, freezing of the ground preventing seeding until about 11 a. m. The blowing of sand from an adjoining farm has practically ruined a few of the dry-land plats of Turkey wheat. The barley nursery seeding under dry-land conditions is completed. All seeding is progressing as rapidly as weather will permit. All winter barley and oats have been winterkilled. Turkey wheat is not far enough above ground to make an accurate determination of the winterkilling as yet, but it is thought that about 10 per cent of this crop has been killed. In the date of planting tests of this variety the late seedings on Oct. 1 and 15 are practically all winterkilled. The seedings made Sept. 1 appear to have survived best.

UTAH:

Nephi Substation. Apr. 23. A precipitation of .39 of an inch occurred on the 17th and 18th. This softened the crust considerably, but subsequent rapid evaporation has left the soil again crusted. This condition is doing but little damage to crops, however. All winter crops are growing nicely. Winter oat plats have been reseeded to spring oats. All spring cereals are coming up, and a good stand is expected.

Several farmers have sown spring wheat on fields cropped last season instead of fallowing them. This is due to the light crop taken off last year and the present good supply of moisture in the soil. Wheat is the only crop being seeded under dry-land conditions, while oat and barley varieties are being sown on the irrigated lands.

CALIFORNIA:

Biggs Cereal Field Station. Apr. 21. The excellent weather now prevalent will greatly promote crop growth. Alfalfa has made a good stand and is looking well. The ten acres of oats for hay are looking well. When these are cut, the land will be fallowed. All land not cropped is being summer-fallowed preparatory to seeding it to winter cereals. Rice seeding has been completed.

The Sacramento Valley, unlike most of the other valleys in California, has suffered but little from lack of rain. It is reported that crop conditions here are much better than in any other section of the state. Grains in the San Joaquin Valley have suffered seriously from drought.

Grains at Chico are beginning to head. The work is in good condition. Mr. Adams expects to visit Chico on the 23d to take notes on the grains.

Apr. 22. Sorghums are being seeded today. Rice seeding in the vicinity of the station still progresses slowly. Considerable acreage yet remains to be plowed before seeding, and the late-plowed land is in poor condition. Many of the plantings cannot be watered for some time owing to incomplete state of laterals leading to the farms.

Dr. Stockberger and Messrs. Thompson and Eder visited the station on the 20th.

Apr. 28. A telegram received from Mr. Adams states that he is leaving for Manhattan, Kansas, on leave of absence for ten days, because of serious illness in his family.

OREGON:

Eastern Oregon Dry-Farming Substation. Apr. 23. Seeding of all spring grains is completed. Corn and sorghum varieties will probably be planted next week. None of the winter barleys and oats have survived. The few plants that survived the winter were killed by the late March frosts. The stands of winter wheat and emmer are very thin. At present, the spring wheats look better than the winter varieties, which is just the reverse of conditions obtaining this time last year.

NEWSLETTER

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U. S. DEPARTMENT OF AGRICULTURE.

Volume V.

MAY 10

1913

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May 10, 1913.

IMPORTANT.

All field men who have not already done so, are hereby instructed to send in immediately estimates of the total amounts required for absolutely necessary expenses to the end of the current fiscal year (June 30, 1913); also, estimates of the total amounts which it would be desirable to expend within this period. In both cases it would be well, if the amounts are considerable, to submit itemized statements.

Field men are hereby informed that while reimbursement accounts can be attested by postmasters, oaths of office cannot be sworn to or affirmed before them, but must be executed before a Notary or other officer having an official seal.

MEMORANDA

The department receives numerous requests for the analysis of waters, drugs, insecticides and other miscellaneous products. To comply with all the requests received would make a great drain on appropriations for other purposes and impede official work. No appropriation has been provided for this purpose, and the Department therefore will not be in a position to make analyses for private parties. (General Memo. No. 17, May 3, 1913)

The Pullman Company has again requested that hereafter sleeping car accomodations be procured by giving a separate transportation request therefor in name of the Pullman Company, instead of purchasing both Pullman accomodations and railway ticket on the same request. This will enable the Pullman Company to attach a transportation request to its voucher. Where a single request is given for both railway and Pullman fares, the request is retained by the railway company and the Pullman Company has no evidence to submit in support of its account. A separate request for Pullman accomodations should therefore always be drawn in favor of the Pullman Company, and not to the railroad company over which the travel is performed. (B.P.I.Memo., May 5, 1913.)

OFFICE NOTES

Mr. Ball has been designated by the chief of the Bureau to act as representative of the Bureau of Plant Industry in the collection, preparation, installation, and demonstration of the Bureau exhibit at the International Dry-Land Congress' Exposition to be held at Tulsa, Oklahoma, October 22 to November 1, 1913. Letters with regard to the collection and preparation of material for the Office exhibit will be sent to the field men interested as soon as the necessary information can be obtained.

Farmers' Bulletin No. 534, Durum Wheat, by Messrs. Cecil Salmon and J. A. Clark, was issued on May 5.

Prof. George Roberts, agronomist of the Kentucky station, called at the office on May 7. He was in Washington as a member of the Crop Reporting Board for May.

FIELD NOTES

LOUISIANA:

Crowley Rice Experiment Station. May 3. Good weather has prevailed during the week. The land could not be worked until May 1 on account of heavy rains during the previous week.

Farmers in this vicinity were able to begin preparations for seeding about April 29. A large acreage still remains to be sown. Early-seeded rice is of poor stand and an unhealthy color.

TEXAS:

Beaumont Cooperative Rice Experiment Station. May 3. Weather very warm and dry the past week.

Many farmers are reseeding rice on account of poor stands. Rice seeded early in April appears to be doing well. Growth of weeds in the rice fields is rapid, but that of rice is slow. It is feared that trouble will be experienced in checking weed growth.

Amarillo Cereal Field Station. May 3. Weather for the past week has been very agreeable, permitting considerable work to be accomplished. Range of temperature during this period has been from 46 to 84 degrees. Total precipitation, .09 of an inch. Small grains are making good growth.

May 6. Mr. Bothgeb reports his arrival at Amarillo on May 4, to find rain falling and the surface of the ground well covered with water. About .63 of an inch fell during the night of the 3rd and morning of the 4th. The winter grains have made but a thin stand, and it is very unlikely that heavy yields will be obtained, even with favorable weather during the remainder of the season. Rye has made a better stand and growth than wheat.

KANSAS:

Hays Branch Station. May 3. Precipitation (rain and hail) 4.14 inches during night of the 2nd and morning of the 3rd. Nursery and forage plantings suffered to some extent from this precipitation, and even the most vigorous wheats suffered slightly. Area devoted to sorghums is ready for planting. Varietal tests of corn on upland and bottom land have been planted.

May 6. Heavy precipitation of May 2nd and 3rd covered the varietal tests of corn from 5 to 6 inches deep with soil. The lister will be run in the rows to throw out this top soil. Spring grains are reviving considerably.

COLORADO:

Akron Experiment Farm. May 7. Weather for past week has been moderate, with prevailing winds. Maximum temperature, 83 degrees; minimum, 31. Greatest daily range, 44 degrees, on May 1. Head rows and a portion of the wheat nursery have been seeded. Wheat in field plats is about 3 inches high, with excellent stand. Oats and barley are also up.

WYOMING:

Cheyenne Experiment Farm (Archer). May 4. Rainfall which occurred on May 2 will materially promote the germination of grains. The weather remains quite cold, however, making germination rather slow. Winter wheat appears to have survived well. The last of the date-of-seeding tests are just commencing to show above ground. Other plats, which had made growth last fall and were frozen or cut off by the winds in the early winter, are again above ground and are looking fairly well. Nursery seedings of oats and barley, and of field plats of barley and peas, are completed. About 700 trees have been planted west of the station buildings as a wind-break. These consist of cottonwood, basketwillow, elm, ash, and jack pine. Meteorological instruments, furnished by the Biophysical Laboratory, have arrived at the station and will soon be installed.

SOUTH DAKOTA:

Bellefourche Experiment Farm (Newell). May 3. Weather during past week has been favorable for field work, but continues to be too cool for rapid plant growth. Although the soil contains sufficient moisture for immediate requirements, rain would be helpful. Winter wheat still continues to make rapid growth, being fully two weeks ahead of spring wheat. Spring grains, although sown later than usual, are already above ground. The seeding of increase rows of oats and wheat during the week completes the sowing of spring grains with the exception of flax. Early seeding of flax was made on May 2, in order to compare its behavior with that to be sown about May 15 or June 1.

Highmore Substation. May 3. Weather for the past week has been very disagreeable. During the first three days of the week winds interrupted the nursery work, and rain fell during the day on May 2. Precipitation of .32 of an inch helped the small grains considerably. Early-seeded grains are up and looking well.

NORTH DAKOTA:

Dickinson Substation. May 3. Cold and windy weather continues. On the night of April 30, .06 of an inch of precipitation occurred in the form of snow. Temperatures for the week: minimum 27, maximum 83 degrees. Field and nursery seedings are completed. The methods of seeding employed at the Arlington Experimental Farm by this office are being employed at the Dickinson station this spring, with the result that about three times as many rows as before can be planted in a given time.

The survival of winter wheat is greater than was at first

thought. The plats have been harrowed. In the date-of-seeding tests the September plantings show considerably greater survival than those made early in August. The nursery is almost completely winterkilled, with the exception of Buffum's No. 17 (winter wheat). Of the 369 winter wheat crosses, 5 live plants have been found, and of the 234 seedings of parent varieties, only 12.

Williston Substation. May 3. Weather continues cold, with no precipitation except to a very slight extent today, accompanied with high west winds. On two nights the temperatures have been below freezing, viz., May 1 and 2, 28 and 29 degrees, respectively. Wheat sown in the nursery April 14 is up and shows excellent germination, but that seeded to field plats on April 22 is not yet above ground. All nursery and field seedings have been made with the exception of flax and prosos.

Mr. Thomas Cooper, President of the North Dakota Better Farming Association, addressed a gathering of business men and farmers at Williston today (May 3). A local organization is being formed in this county (Williams), and a representative will be stationed here.

MONTANA:

Judith Basin Substation (Moccasin). May 5. Cold and stormy weather, with snowfall, prevailed during the early part of the week. On the night of May 3, from 4 to 5 inches of snow fell. This will interrupt field work, but will be of benefit to spring grains. Nursery seedings of wheat and barley were made on May 2, and on May 3, the first seeding of flax was made.

IDAHO:

Aberdeen Substation. May 4. Weather continues to be cold and windy. Average wind velocity for the past week has been 9.1 miles an hour. Average minimum temperature for the past three weeks, 28.4 degrees; maximum, 63.1 degrees. Rainfall is greatly needed to stop the blowing of the soil, which has practically ruined more than one-third of the Turkey wheat plats. Alfalfa on dry-land areas will have to be replanted to considerable extent, because the plants have been either cut off or blown out. Other spring crops on the dry-land areas are doing nicely.

Winter wheats in this vicinity are not in good condition.

From present indications, there will be only about a two-thirds stand. Farmers complain that small worms are cutting off the wheat at the roots to considerable extent. The best looking wheat which has been seen to date is on land which was sown to that crop last year and on which a good stand of volunteer grain had been secured. This unusually good volunteer stand is attributed to the fact that the stubble aided materially in holding the snowfall, which protected the plants.

OREGON:

Eastern Oregon Dry-Farming Substation (Moro). May 1. Since April 8 there has been practically no precipitation, and rain is needed. The total precipitation since that date has been but .10 of an inch, and the total for the month of April but .58 of an inch. The average daily wind velocity was 10 miles an hour during the last ten days of April. The highest number for any one day of that month was 396 miles, on April 21. During April the temperature ranged from 29 to 70 degrees, the latter being unusually high for this season of the year. Early plantings of corn and sergos have been made, and other plantings will be made as soon as the weather moderates. The work of summer-fallowing has been begun.

The large area of winter oats and barleys will be a total failure. There is less than half a stand of winter wheat, which, it is believed, was damaged to some extent by too early harrowing, done to break the heavy crust which had formed. Unfortunately, extremely cold weather prevailed immediately thereafter. In the tillage experiments, the plats of unharrowed winter wheat show better stands than those which were harrowed.

Harney Branch Station (Burns). April 30. Mr. Breithaupt reports that spring is very backward in this section. Cold weather and snow still prevail. Seeding of wheats and field peas on the station is completed. Earliest plantings of peas will soon be above ground.

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NEWSLETTER

OF THE

OFFICE OF CEREAL INVESTIGATIONS,

BUREAU OF PLANT INDUSTRY,

U. S. DEPARTMENT OF AGRICULTURE.

Volume V.

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MAY 17
1913

May 16, 1913.

MEMORANDUM FOR THE SECRETARY *

Concerning Departmental Publications in Scientific and Technical Journals.

Dear Mr. Secretary:

For the last five or six years the appropriations for the work of the Department have grown rapidly, while the appropriations made for publishing results of investigations have grown slowly. As a result there is a grest deal more material being accumulated which should be published than it is practicable to publish, owing to lack of funds and for other reasons. For the last ten or twelve years it has been the policy of the Department not to permit any of its technical work to be published outside, with the result that there has been considerable stagnation and some rather important results have been lost through lack of timely publication.

It is believed that by taking advantage of existing specialized avenues of publication the usefulness of a considerable amount of scientific and technical work done by the Department would be increased and the financial strain, which is now a serious handicap to the Department, would be practically removed. It is the practice of many institutions, as you know, using public money, to permit publications of this kind in outside reputable journals, provided in all cases proper credit is given to the institution. I would therefore respectfully recommend that hereafter reports of technical research, designed particularly for the attention of scientists in other institutions, be published in any scientific journal which is presumed to reach most satisfactorily those scientists. In no case, however, should the authors accept compensation for such articles. Manuscripts for scientific and technical journals should receive the approval of the Chief of the Bureau in which the paper originates, and should also be submitted to the Secretary's office before being forwarded for publication.

Very respectfully,
(Signed) B. T. Galloway,
Assistant Secretary.

Approved:
D. F. Houston
Secretary.

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* No. 16, Apr. 28, 1913.

OFFICE NOTES

Mr. Derr will leave early next week on a short trip through the Southern States to study the production of winter rye and winter spelt, and to make arrangements for some cooperative work with buckwheat grown at high altitudes in Virginia and North Carolina.

Mr. Warburton will also leave early next week for a short trip through the Southern States to study the production of winter oats, and to look after the cooperative tests which are being conducted with some of the hybrids and pedigreed strains produced several years ago.

Prof. H. M. Cottrell, Agricultural Commissioner for the Rock Island Railway system was a visitor at the Office May 12. He is interested in the promotion of a better grade of seed wheat in Western Oklahoma, in the extension of kafir growing, and especially in the better utilization of Southwestern feeding crops through the introduction of silos.

FIELD NOTES

VIRGINIA:

Arlington Farm Cereal Work. May 15. A precipitation of .3 of an inch occurred on May 14, the first since Apr. 27. The earlier varieties of barley will be ready for harvest before the end of next week. Wheat is now heading, with excellent prospects for a good crop. The earlier oats, which are now fully headed, will be rather short because of dry weather. Rye, as usual, is looking well.

LOUISIANA:

Crowley Rice Experiment Station. May 10. Good weather has prevailed for the past week. Rain is needed.

May 13. All rices planted last week and the week before are germinating nicely, and the earliest-seeded rice on increase plats has made a good stand. A precipitation of 1.31 inches occurred on the 11th. Mr. Jenkins expects to leave today for the Rice Farm at Beaumont, Texas, to assist Mr. Johnston.

TEXAS:

Amarillo Cereal Field Station. May 10. Conditions are very favorable to crops which are growing rapidly. Total precipitation for the past week, 1.38 inches. Temperature has ranged from 45 to 77 degrees. Fruit trees planted this spring are doing nicely. The 200 black locust and 100 honey locust trees recently received from the Forest Service have been planted.

Mr. George Bishop of Cordell, Oklahoma, formerly of this bureau, was a visitor at the station on the morning of the 10th. On the evening of the 10th a meeting was held at the Court House for the purpose of promoting the establishment of silos.

KANSAS:

Hays Branch Station. May 10. A precipitation of .62 of an inch on the 9th and 10th will help to soften the crust caused by the last heavy rain. About half of the 5 inches of soil covering the varietal test of corn as a result of heavy precipitation of May 2 and 3, has been removed, the lister being used without the subsoil attachment. It is now believed that the corn will be able to come through the ground. The cultivator has been used on fallowed Field 9-2 to prevent drifting, which began on the 8th. Some of the ear-row Albright's tests with White Dent, Hogue's Yellow Dent and Pride of Saline corn were planted on the 9th.

COLORADO:

Akron Experiment Farm. May 10. Rain amounting to .82 of an inch has fallen steadily since the 8th. Practically all of this is being absorbed by the soil and will be of benefit, as the ground was becoming quite dry. Maximum temperature for the week, 81 degrees; minimum, 39. High winds prevailed on the 6th, interrupting the seeding of the wheat nursery. Field work could not be resumed because of the rain. Head-row tests of wheat, oats and barley are up and show good germination. The oat plats and also the barley plats, with one or two exceptions, have made good stands and are in the second and third leaf stages. Winter wheats are stooling heavily. Alfalfa is making good growth.

Dr. Shantz, of the Office of Alkali and Drought-Resistant Plant-Breeding Investigations, was here from Apr. 29 to May 8. Mr. Peters, of the same Office, arrived May 3. Dr. Briggs, of the Office of Biophysical Investigations, was a visitor on Apr. 13.

WYOMING:

Cheyenne Experiment Farm. (Archer) May 10. A precipitation occurred on May 8 and 9 which will be of material benefit to the crops, which are just appearing above ground, as the soil has become quite dry. Wheat and oats in the varietal and rate-of-seeding tests are up. Wheat, oats and barley on the D.L.A. plats are also up. Winter wheat is making little growth. One plat of Black Winter emmer winterkilled almost entirely.

SOUTH DAKOTA:

Experiment Station, Brookings. Apr. 29. Prof. Champlin reports the following interesting data, which was inadvertently omitted from the last issue: During the past week I inspected the Highmore and Eureka substations, finding everything in good condition. It was noted with considerable interest that, of all the field plats of winter wheat sown at Highmore, those seeded to Kharkov wheat (C.I. 1442 and Akron selection 18, '09, therefrom) were the only ones to survive the winter with anything like a satisfactory stand. This is particularly interesting because this selection was the only one to survive the previous winter.

At Eureka, in the rate-of-seeding tests, those plats sown at the rate of 3 and 4 pecks per acre survived the winter, while those sown at the rate of 5 and 6 pecks winterkilled. This would seem to indicate a lack of sufficient moisture for the heavier-seeded plats.

At Brookings, winter wheat sown on the level so that the crowns were exposed to the winds, is a failure, while that sown quite deep with a drill, so that the crowns were protected by the ridges between the rows, is entirely successful, as is also the wheat sown among standing corn-stalks, with the exception of spots which were covered by sheets of ice.

May 7. Prof. Champlin reports that he purposes to visit Eureka, Aberdeen and McLaughlin this week in order to inspect the work at the Eurka station, visit cooperators at Aberdeen, and address a farmers' meeting at McLaughlin. May 16 is to be High School field day at Highmore, when all of the students of the city High School will visit the station to learn the nature of the work there conducted. At Cottonwood, a picnic will be held at the station by the local residents. The forenoon will be devoted to studying the various crops, and the afternoon to speaking and out-of-door sports. A large attendance is anticipated.

NORTH DAKOTA:

Dickinson Substation. May 10. The past week has been cold and windy, with but little precipitation, in the form of snow. Field plats of wheat, oats and barley are up and have made a good stand. Part of the nursery is up, but it is feared that the remainder will germinate unevenly because of lack of precipitation.

Williston Substation. May 10. The past week has been cold, with but slight precipitation. Frost occurred several nights, but apparently did no damage. Field plats of wheat, oats, and barley seeded Apr. 22 are just above ground. Some of the nursery wheats, seeded slightly earlier, are an inch high. The soil is still well supplied with moisture, and grains appear to be germinating well.

MONTANA:

Judith Basin Substation. May 12. Weather for the past week has been cold and stormy. On May 10 there was a precipitation of .61 of an inch. Because of cold weather obtaining for the past three weeks the spring grains have been slow in germinating, but they are now beginning to show above ground, and, as there is ample moisture in the soil, they should make rapid growth. The flax nursery was sown early in the week, and the varietal tests this morning. With the exception of a few millets, the spring seedings are completed.

UTAH:

Nephi Substation. May 3. A report from Mr. Cardon, inadvertently omitted from the issue of May 10, contains the following notes: Freezing weather has obtained almost continuously during the past week, and a very light snowfall occurred on May 1. High winds prevail. Unfavorable weather conditions have greatly retarded crop growth. Winter grains are beginning to tiller, but are about a month late. Spring grains are well up, and from present indications good yields will be obtained. Potatoes and peas have been planted. Alfalfa is in very satisfactory condition.

Crops in San Pete Valley, east of Nephi, are in good shape. On a recent trip to Manti several fields were noted which give promise of exceptional yields. A few wheat fields, on a ridge very much like Levan ridge in this vicinity, make a good appearance. Crops in the northern part of Utah are very late, while in southern Utah they are a little farther advanced and good reports have come from that section.

Two men who recently stole both Government and State property from the Nephi Substation, (an account of which appeared in the Newsletter of April 26), have been apprehended and are being tried at Manti on a charge of safe-blowing. If acquitted, they will immediately be rearrested on the burglary charge.

May 10. Weather during the past week has been warm, temperature reaching 80 degrees on several days. There was no excess of wind, and evaporation was about normal. Rain is needed. The crust is so thick that the sun can have little effect on the cold, wet ground beneath it. This condition prevents cultivation. Some of the check plats are being used in an experiment to determine the best method of handling this crust. Winter wheat is making fair growth, but emmer and barley are not doing as well as usual. Spring grains are well above ground. All plantings of corn, sorghums (including broomcorn), potatoes, peas and beans are completed. Plowing is practically completed, and soil-sampling is now in progress.

The movement among the dry-farmers for better seed-grain (noted in the Newsletter of Apr. 16) is growing. The grain growers of this State are planning to meet in conjunction with the Utak Millers' and Grain Dealers' Association at Salt Lake City on June 7 for the purpose of discussing the subject. Mr. Cardon has been asked to make the leading address at this meeting.

Farmers in this section are looking to the Nephi Substation for advice on cereal improvement.

OREGON:

Eastern Oregon Dry Farming Substation (Moro). May 10. The heaviest precipitation since the first week in April occurred on May 9 and 10, being .40 and .56 of an inch, respectively. High winds and hail prevailed on the afternoon of the 10th. Field peas, which were from 4 to 6 inches high, were stripped of their leaves. The small trees in the forestry planting which had put forth leaves suffered the same fate. Wire worms have somewhat damaged the winter and certain of the spring grains, whose growth has been retarded by the prevailing cold weather. The planting of corn and sorghums has been completed.

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Volume V.

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MAY 23
1913

May 23, 1913.

OFFICE NOTES.

Dean H. L. Russell of the Wisconsin University called at the office on the 17th in connection with some proposed cooperative experiments in cereal disease work.

FIELD NOTES

LOUISIANA:

Crowley Rice Experiment Station. May 17. The warm weather which obtained during the past week caused rapid plant growth, and the precipitation occurring during the latter part of the week in the form of showers is preventing the formation of a soil crust before the young plants have time to emerge. Heavy rainfall occurred on the 11th, which was beneficial to growing plants and seed germination. Practically all rices are above ground and have made a good stand.

TEXAS:

Beaumont Cooperative Rice Experiment Station. May 10. Although the weather continues very dry all rice on the station is looking well. May 17. Rain fell on the 15th, since which time the weather has been cooler. Mr. Jenkins, of the Crowley Rice Experiment Station, was a visitor on the farm from the 13th to the 16th inclusive.

Rice -seeding operations in Louisiana and Texas for 1913 are near completion. Some planters, however, will sow as late as July 1, and even later. Considerable replanting has been rendered necessary on account of heavy cold rains in April, which caused rice to rot in the ground. The damage done by the Mississippi River floods has been confined to a comparatively small district in the vicinity of Natchez, on the Louisiana side.

Amarillo Cereal Field Station. May 17. Weather for the past week has been favorable for field work. Temperature has ranged from 44 to 98 degrees. No precipitation. Winds have prevailed all week, with particularly high velocity on May 12 and 13. Spring wheats and winter rye are making good growth. Oats are growing slowly. Harrowing has been in progress to destroy weeds and conserve moisture. Early plantings of the grain sorghums have germinated, but are not yet above ground. Seed from selected heads will be sown about May 20, if weather permits. Plantings of corn have been made for the offices of Dry Land Agriculture and Corn Investigations. Canadian field peas on the D. L. A. plats are making excellent growth. A new machine shed is being added to the farm buildings. Mr. J. S. Cole of the Office of Dry Land Agriculture visited the station on May 12 and 13.

KANSAS:

Hays Branch Station. May 17. Practically no precipitation has occurred the past week. Head-row and date-of-seeding tests of grain sorghums have been planted.

COLORADO:

Akron Experiment Farm. May 19. Maximum temperature for the past week, 70; minimum, 33. Total precipitation, .54 of an inch. Soil is in excellent condition, and rapid germination and excellent stands have resulted. Seeding was again delayed because of the rain. It is hoped, however, to complete the seeding of the oat and barley nurseries on the 20th, and to sow prosos, flax, and buckwheat, and plant grain sorghums during the week. Winter wheat and rye have stooled heavily and are now jointing. Spring grains are looking well. The final seedings of wheat in the nursery are just above ground.

WYOMING:

Cheyenne Experiment Farm (Archer). May 17. Weather conditions for past week, cold and cloudy. Precipitation, .54 of an inch, on the 15th. All crops are above ground, but are making slow growth due to cold weather. Fifty acres have been broken by a gasoline plowing outfit hired for the purpose, and 20 acres of this have been disked and harrowed. Prof. W. W. Burr of the North Platte, Nebraska, Station, has installed the weather instruments furnished by the Biophysical Laboratory

of this Bureau. He will remain at the station until the corn and flax varieties are seeded on the D. L. A. rotation plats.

SOUTH DAKOTA:

Bellefourche Experiment Farm (Newell). May 10. Weather continues cool and generally unfavorable to crop growth. No beneficial precipitation has occurred since March, and the soil is quite dry. Rain is needed to germinate the grains sown in late-plowed ground. Germination in general has been slow and to some extent uneven. Winter rye has made better growth than other grains, and is beginning to show the effects of drouth. Early-seeded plats of winter wheat have also made considerable drain on the moisture supply and are in immediate need of rain.

Highmore Substation. May 10. Weather continues cold and cloudy retarding field work. Only a trace of precipitation has occurred. High winds continue to make seeding difficult and slow. Seeding of head-rows is completed with the exception of flax and millet. The last of the date-of-seeding tests will be sown the coming week; also, ear-row tests of corn. A large number of trees are being planted as a wind-break on the roads running north and south between each series.

May 17. Precipitation of more than half an inch during the past week has been of value to the growing crops. Continued cool weather is enabling the small grains to get an excellent start. Winter rye is about a foot high. All seeding is completed with the exception of the millets, tenth-acre plats of flax, and a few tests of grain sorghums and corn. The sorghums and corn will be planted on the 19th if weather permits. Prof. Manley Champlin visited the station on the 16th.

NORTH DAKOTA:

Dickinson Substation. May 17. Weather the past week has been cool, but timely rains have enabled grains to make good growth. Precipitation, .44 of an inch. Maximum temperature, 73 degrees; minimum 30.

Williston Substation. May 17. Weather continues cold, with considerable wind. Total precipitation for the week, only .30 of an inch. Temperature: maximum, 75 degrees; minimum, 27. Frosts continue, but are not injuring the crops. The grains above ground are making slow growth, but stooling well. Varietal tests of flax were seeded on the 16th.

CALIFORNIA:

Biggs Cereal Field Station. May 13. Mr. Adams has returned to the station after leave of absence in Manhattan, Kansas, and reports as follows: Strong north winds prevailing the past two weeks have made it necessary to irrigate the rice plats three times during a period of 15 days. The majority of the farmers in this section have finished their rice seeding, but are not yet able to get water. This delay in obtaining water will cause many farmers to sow a smaller acreage to rice than they originally intended.

May 19. The meteorological instruments furnished by the Biophysical Laboratory have been received. Weather is favorable for crop growth. Rice has made a good stand and is looking well.

May 13. The hot dry weather which has obtained for three weeks has hastened the ripening of all grains at Chico. Although the effect of the drouth is noticeable the grains are filling well. Crop conditions in this section continue favorable, while the grain crop in the San Joaquin Valley is reported as being about 25 per cent of normal. There is a shortage of grain and hay in most of the other sections of the State.

May 19. The grains at Chico are looking well and promise excellent results. All grains are looking better this year than last at the same stage of development. Barley is about a week ahead of wheat, and both are looking better than oats. Arlington Awnless barley is ripening about 8 days earlier than any of the other barley varieties. Some of the grain selections from various crops are looking exceptionally well. Wheat is filling well and will probably be ready for harvest early in June. Oats are not looking as well as wheat and barley, but the earlier maturing oats look better than the later ones. The acreage of oats in this section of the state is rather small. The hay crop (from grains) is heavy; practically all of it has been cut, and it is selling for $10 per ton in the field.

OREGON:

Eastern Oregon Dry-Farming Substation (Moro). May 17. Following the rain of last week the weather has been cold and windy, with practically no precipitation. Temperatures: maximum, 61 degrees (on the 16th); minimum, 36.5. Crops are suffering from cool weather, and are making slow growth. Wire worms continue to damage the grains to some extent. The field peas, which were stripped of their leaves by hail, do not appear to be recovering. Alfalfa was also damaged by the hail storm. Two additional acres each of corn and alfalfa were planted the past week. The work of preparing the ground for summer fallow is progressing, and a new fence is being built around the station farm.

Received too late for insertion in proper sequence.

SOUTH DAKOTA:

Bellefourche Experiment Farm (Newell). May 19. Weather continues to be cool. Showers occurred during the latter part of the week, the total precipitation being slightly more than 1 inch. More rain is threatened. Crops have been greatly benefitted by the rain, as they had begun to show the effects of drouth. Varietal plats of flax and prosos will be seeded as soon as the weather permits.

IDAHO:

Aberdeen Substation. May 18. The drouth has been broken by a precipitation of .90 of an inch which equals the total for the past 4½ months. More rain is threatened. The barley nurseries on both irrigated and dry land are in excellent condition. Field plats of barley are also looking well, with the exception of the Princess variety, only about half of which germinated. In the cultivation experiments the broadcast seeding of winter wheat has almost entirely winter-killed. The cross-drilled plat looks well, but the normal seeding has been damaged by a sand storm. In the date-of-seeding tests

the early seedings are making rapid growth, in marked contrast with the later seedings. Varietal plats of winter wheat which were planted later than other plats, show considerable winterkilling.

All crops in the vicinity of the station, on both dry and irrigated lands, will be greatly benefitted by the rain, as they were beginning to show the effects of drouth. Farmers had begun to irrigate their grain and potato crops, when the precipitation occurred. Fields of wheat sown late last fall, and which winterkilled to considerable extent, have been seeded to other crops, such as barley, Bluestem wheat, oats, and flax. A few farmers have sown alfalfa in rows in the winterkilled areas, for the purpose of producing seed.

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Volume V.

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May 31, 1913

NOTICES TO FIELD MEN

Collection of Cereals for Herbarium.

Special attention is called to C. I. Memorandum No. 5, entitled "Instructions regarding material for cereal herbarium", which is attached to this Newsletter. The necessary material for drying and preserving the specimens will go forward shortly.

Freight Charges.

Attention is again called to instructions regarding the presentation of freight items on vouchers. Freight charges must not be submitted on either Form 4 (reimbursement) or Form 5 vouchers unless payment of freight is specifically included in Authorizations. To be accepted, freight charges should be presented on Government bills of lading.

Meeting of Great Plains Cooperative Association.

It is expected that a meeting of the Great Plains Cooperative Association will be held in August of this year. The place and date of this meeting are not yet determined. Field men in the section of the Great Plains in which it is held will be authorized to attend, and others also if possible. Each man in this area should consider a desirable topic on which to prepare a paper for presentation at this meeting

OFFICE NOTES

Mr. Warburton returned today from a short trip through the southern states in the interests of oat investigations.

FIELD NOTES

VIRGINIA:

Arlington Farm Cereal Work. May 28. Weather continues to be cold and wet, the precipitation for the past week being unusually heavy. Total precipitation for May, 4.45 inches, of which 2.38 inches occurred in the afternoon and night of May 23. This caused considerable lodging of many of the more advanced plats of winter wheat and barley, but has greatly lessened the prevalence of leaf rust. The field plats of Arlington Awnless winter barley were harvested on the 21st, this being the earliest date of harvest yet recorded at Arlington Farm. Several of the earlier two-rowed and hull-less barleys are rapidly ripening, and will be ready to harvest before the end of this week. Winter wheats are now in full head, and are looking exceptionally well. The later varieties of winter oats will also be in full head in a few days, while those already headed are making excellent growth.

It is interesting to note that while last year, as in previous years, the earlier varieties of winter barley, particularly those of the awnless and hooded types, were always more or less injured by attacks of birds, this year not a single plat has been molested, although the birds are present in large numbers.

LOUISIANA:

Crowley Rice Experiment Station. May 24. Temperatures for the past week: maximum, 90 degrees (May 18); minimum 54 (May 24). Total precipitation, 1.89 inches, of which 1.19 fell in 24 hours. This rain has been very beneficial to crops, although it delayed field work, and was followed by north winds too cold for growing crops. The winds dried the soil, causing a hard crust to form. Transplanting of nursery rices will be begun shortly. About 8 acres of oats grown for feed have been harvested, leaving about 4 acres yet to be harvested.

TEXAS:

Beaumont Cooperative Rice Experiment Station. May 24. Heavy rains occurred during the middle of the week, since which time the weather has been cooler. Cotton has been planted on the rotation plats. Mr. S. H. Tracy, Special Agent of this Bureau in Forage Crop Investigations, with headquarters at Biloxi, Miss., visited the station on May 24.

Amarillo Cereal Field Station. May 24. Weather for the past week has been pleasant. Maximum temperature, 89 degrees; minimum, 47. Dry weather continues, only a trace of precipitation occurring the past week. The small grains on the continuously cropped rotation plats show signs of wilting, but those in the varietal plats do not appear to be so badly in need of moisture. Three field plats of Burt oats are beginning to head. The nursery has been cultivated to kill the weeds. Two varieties in the barley nursery are beginning to head. Early plantings in the date-of-seeding tests of grain sorghums are from 2 to 3 inches high, with a good stand. Planting of other varieties is now in progress. Corn planted on the 14th was above ground on the 20th, and a good stand secured. Varieties of proso and millet were seeded on the 24th. Mr. W. D. Griggs of the Dalhart Experimental Farm was a visitor on May 24.

May 26. Weather continues dry. Varietal tests of grain sorghums have been planted; also some rate-of-seeding tests. A few field plats and the late date-of-seeding tests are yet to be planted.

KANSAS:

Hays Branch Station. May 26. Planting of the grain sorghums was completed today. The Fourth Annual Meeting of the Kansas Dry Farming Association is to be held at Garden City on June 4 and 5. From present indications, considerable numbers will attend.

COLORADO:

Akron Experiment Farm. May 26. Maximum temperature for the week, 84 degrees (May 25 and 26); minimum, 38 (May 20); greatest daily range, 36 degrees. Average wind velocity, 6.24 miles. There has been but a trace of precipitation this week. With the planting of the grain sorghums, all seeding will have been completed. Barley and oats in the nursery germinated rapidly and produced an excellent stand. Gophers have considerably damaged few rows of the barley last to germinate. Messrs. J. S. Cole and W. W. Burr of the Office of Dry-Land Agriculture visited the station on May 22 and 23.

In this section considerable acreage has been planted to spring crops, and all crops are in generally good condition. Winter grains are making rapid growth.

WYOMING:

Cheyenne Experiment Farm (Archer). May 24. Maximum temperature for the week, 80 degrees; minimum, 32.5. Total precipitation, .88 of an inch. Varietal tests of flax have been seeded, and similar tests of corn and potatoes planted. Spring wheat, barley, and oats are from 4 to 6 inches high, and are looking fairly well. Peas are also looking well. Seeding of flax and planting of corn, alfalfa, and brome grass on the D. L. A. plats have been completed. Crop prospects are favorable at this time. About 18 acres have been planted to corn and early Amber sorghum for forage. A recently-broken area of 38 acres is now being disked. A total of about 125 acres have been broken, to date, and the ground is in good shape. Painting of the station buildings is now in progress.

SOUTH DAKOTA:

Bellefourche Experiment Farm (Newell). May 24. Cool weather previously obtaining has been followed by warm growing weather. A precipitation of 1.34 inches occurred between May 12 and 19, practically all of which entered the ground and has been of great benefit to crops, which are making rapid progress. Winter rye is beginning to head, and early-sown winter wheat has nearly reached the heading stage. Flax varieties were seeded, May 23, on both irrigated and dry land. This completes the spring seeding with the exception of the last date-of-seeding of flax and the sowing of a few proso varieties. Farmers in this vicinity are manifesting an interest in flax as an irrigated crop, and it is hoped that valuable results will be obtained from their tests this year.

Highmore Substation. May 24. Precipitation for the past week, 2.03 inches. Soil samples taken on the 23d show the soil to be wet to a depth of 30 inches over most of the farm. Grain sorghums and corn varieties were planted on May 23 and 24. Next week will be spent in weeding the nursery and planting forage crops. The continued cool and rainy weather prevented the trees set out this year from dying.

Mr. Morrison expects to visit the Brookings station early in June, to confer with Professor Champlin.

NORTH DAKOTA:

Dickinson Substation. May 24. Weather conditions during the past week have been ideal for crops. The first half of the week was cool with some snow; the latter half warm with .42 of an inch of rain on the 24th. Total precipitation for the week, 1.09 inches. Maximum temperature, 73 degrees; minimum, 32. Flax and proso nurseries were seeded and grain sorghums planted this week.

Williston Substation. May 24. Maximum temperature for the week, 78 degrees (May 22); minimum, 27 (May 18); greatest daily range, 44 degrees. Total precipitation, .53 of an inch. Beginning with May 22, good growing weather has prevailed. Stands are good of wheat, oat, and barley varieties both in the nursery and in field plats, and the plants are between 3 and 4 inches high. Light rains which fell immediately after the recent seeding of flax should hasten germination and produce a good stand.

MONTANA:

Judith Basin Substation (Moccasin). May 18. Weather for the past week has been cold and stormey. Total precipitation, .77 of an inch, with rain still falling. Spring wheat, oat, and barley varieties are up and have made a good stand.

May 26. Weather for the past week has been quite warm, with only a trace of precipitation. All cereals are making rapid growth. Flax varieties are now above ground.

IDAHO:

Aberdeen Substation. May 26. Weather is moderating, the temperature the past week dropping only once as low as 32 degrees. Total precipitation, 2 inches, in the form of rain and hail, the latter, however, causing practically no damage. Dry-farming crops look very well, and the prospects for a heavy yield are excellent. All plats of alfalfa grown for seed have been clipped in order that they may mature and set seed at the season when conditions are best suited to this process. All planting is practically completed. It is proposed to sow the railroad right-of-way through the station to alfalfa for seed production, the principal objects being to keep out weeds and improve the appearance of the station.

UTAH:

Nephi Substation. May 19. Weather for the past week has been dry and cold. A slight rainfall occurred this morning, and more is threatened. Winter crops are beginning to make rapid progress. Spring oats are making good growth, but the other spring crops are not yet above ground. All plowing was completed on the 17th, and the ground is now in good condition, with weeds well under control.

May 24. The rainfall occurring on the 19th of May and the 20th amounted to .25 of an inch, which softened the crust sufficiently to permit harrowing. Temperature reached 86 degrees at times during the past week, and the nights were comparatively warm. The growth of crops due to the higher temperature is very noticeable.

The men who burglarized the station here some weeks ago, and who were being held at Manti on a charge of safe-blowing, succeeded in escaping, but were captured about 75 miles south of Nephi and returned to Manti, where they are now being guarded night and day.

CALIFORNIA:

Plant Introduction Garden (Chico). May 26. Weather the past week has been favorable to crop growth, and the grains are looking well. Some of the barley varieties are ripening and will soon be ready to harvest. It is expected that good yields will be obtained this year.

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NEWSLETTER

OF THE

OFFICE OF CEREAL INVESTIGATIONS,

BUREAU OF PLANT INDUSTRY,

U. S. DEPARTMENT OF AGRICULTURE.

Volume V.

JUN 6
1913

June 6, 1913.

NOTICES TO FIELD MEN

Expense Accounts

All men in the field, whether traveling or on field stations, should arrange to send in the final expense accounts under their authorizations for the present fiscal year as soon after June 30 as possible.

Transportation Requests.

As transportation requests issued on 1913 appropriations are not good after June 30, 1913, you are requested to return without delay any unused transportation on hand July 1 to this Office for cancellation. In this connection your attention is invited to paragraph 12 of the Fiscal Regulations.

Not a Winter Durum Wheat

Teiskaia wheat, C. I. No.3266 (S.P.I. No.32157) distributed as a winter durum and now growing on some of the field stations, is found on examination of the original sample to be not a durum wheat but a common winter wheat.

OFFICE NOTES

Dr. Humphrey left June 3 on a trip to the Western States, including Kansas, Minnesota, Washington, California and Texas, in the interests of cereal disease work and to inspect the cereal disease experiments conducted by this Office. He will probably return about July 10.

Mr. Ball will leave about June 16 on a trip to the field stations and other places in Iowa, Kansas, Texas, New Mexico, Arizona, California, Nevada, Utah and Colorado.

FIELD NOTES

VIRGINIA:

Arlington Farm Cereal Work. June 4. Weather the past week has been fair and favorable to rapid plant growth. The earlier varieties of winter barley have been harvested and will be thrashed next week. The earlier varieties of winter oats are ripening rapidly. The cool, wet weather obtaining during the latter half of May greatly improved the oat crop. However, the tallest plants are not more than 12 inches in height. Winter wheats are looking well. Mr. C.R. Ball visited the farm on June 3 to inspect the cereal work.

LOUSIANA:

Crowley Rice Experiment Station. May 31. Ideal weather prevailed during the whole of the past week. The transplanting of nursery rices will be completed this week. All other rice will be irrigated.

TEXAS:

Amarillo Cereal Field Station. May 31. Weather continues dry, and for the past week, hot, the maximum temperature ranging from 90 to 97 degrees; minimum, from 60 to 67. Precipitation for the week, .18 of an inch (May 29). Total precipitation for the month, 1.73 inches. The deficiency for the year, to date, is 2.67 inches; for May, 1.55. The continued dry weather, with occasional hot winds, is doing considerable damage to the small grains. Indications are that the oat crop in field plats will be very short. Two spring wheat selections are beginning to head. Winter rye is in the flowering stage. In the nursery, some of the various grain selections are not yet showing the effects of the drought, due to greater distance between the plants and regular spacing in the rows. Barleys show the effects of the drought more than do wheat and oats. The early plantings of sorghums in the date-of-seeding tests aremaking fair growth considering the continued drought. In the varietal tests, all are above ground except broomcorn and shallu. Milos have made a uniform stand throughout. Considerable damage has been done to forage crops by ground squirrels. During the week plantings have been made of watermelons, cantaloupes, peanuts and cowpeas. Mr. E. Gentry, State Agent (Oklahoma and Texas) for the Office of Farmers' Cooperative Demonstration work, and Mr. Ganzer, District Agent in Texas for the

same Office, headquarters at Denton, visited the farm on May 27.

Mr. Wermelskirchen was married on May 29 at Manhattan, Kans., and returned to the station with his bride on May 30.

KANSAS:

Hays Branch Station. May 31. Very high temperatures have prevailed the past week, with no precipitation. Wheat on deep-tilled fallow land is beginning to show the effects of drought, while the varietal tests of wheat on listed fallow ground are apparently not suffering. In the State experiments, the tests of selected strains on deep-tilled ground have made such rank stooling and growth that the straw is noticeably weak and inclined to lodge before heading. The six plats of flax damaged by the hail storm of several weeks ago, have never fully recovered. The forage crops which had to be replanted after the storm, are now doing very nicely. Oats and barley sown Mar. 24 are beginning to head.

COLORADO:

Akron Experiment Farm. May 31. A severe thunderstorm, accompanied by high winds, occurred on the nigh of May 30, with but a trace of precipitation. Maximum temperature for the week, 91 degrees; minimum, 48. The hot, windy weather, together with continued lack of precipitation, has been detrimental to the grains, especially winter wheat. The field plat of Tennessee Winter barley has headed. Flax and proso varieties are just above ground and need rain to insure an even stand. With the planting of the last date-of-seeding tests of sorghums next week, all spring plantings will have been completed. Mr. A. C. Dillman, of the Office of Alkali and Drought-Resistant Plant-Breeding Investigations, was at the station from May 27 to 30, completing his spring seedings.

WYOMING:

Cheyenne Experiment Farm (Archer). May 31. Soil is well supplied with moisture to a depth of two feet, and crops have made good growth. Maximum temperature the past week, 84 degrees; minimum, 47. Corn and flax are beginning to show above ground. All spring seeding is completed.

SOUTH DAKOTA:

Bellefourche Experiment Farm (Newell). May 31. Temperatures have been exceptionally high since warm weather commenced during the week of May 19. Total precipitation for the week, .53 of an inch, on May 19. All plants are growing rapidly. Favorable weather conditions have also enabled field work to progress rapidly. Winter grains are far ahead of those sown in the spring. Their early start and subsequent rapid growth has exhausted most of the soil-moisture. Although the total rainfall for the month was about 2 inches, winter wheat shows the need of rain. Spring grains, which were delayed by continued cold weather, are now making rapid growth. A good stand has been secured of all grains, that of winter wheat being too thick.

Highmore Substation. May 31. Another heavy precipitation occurred the past week, totaling 1.56 inches. This rainfall, followed by high temperatures, has caused rapid plant growth. Total precipitation for the month of May was 4.5 inches. Prospects for a good crop are excellent. Grain sorghums are above ground, and under existing favorable conditions, it is thought they will make rapid growth to offset the delay in planting due to continued cold weather earlier in the season. With the sowing of flax varieties and millets next week, all spring plantings will have been completed.

NORTH DAKOTA:

Dickinson Substation. May 31. Weather the past week has been hot with only a trace of precipitation, May 25. Maximum temperature, 92 degrees; minimum, 44. Total precipitation for May, only 1.78 inches, which is below normal. Winter rye is 2.5 feet high and is starting to head. Winter wheat is about 6 inches tall and no further advanced than spring wheat. The environmental plats of flax planted last week are above ground. Corn on the D.L.A. plats has also emerged. All crops are making good growth.

Williston Substation. May 31. Weather the past week has been excellent for rapid growth of plants. Maximum temperature, 95 degrees; minimum, 45. Total precipitation, .19 of an inch. The soil contains plenty of moisture and crops are looking well. Field plats, which were all seeded on summer fallow, germinated perfectly with the exception of Velvet Don wheat (C. I. 1445) which was damp when planted and appeared to have heated during the winter. A germination of only about 33 per cent occurred, and the stand is very thin. The nursery was seeded on

ground previously cropped to potatoes, and, although there seemed at the time to be ample soil moisture, 10 per cent of the seed germinated only after precipitation occurred. However, the stand is good. Rains occurring shortly after flax and proso were planted greatly benefitted these crops and the stand is perfect.

MONTANA:

Judith Basin Substation (Moccasin). June 2. Weather continues warm and favorable to rapid crop growth. Total precipitation for the week, .88 of an inch, of which .63 of an inch fell in about two hours on May 28. Total precipitation for May, 2.48 inches.

OREGON:

Eastern Oregon Dry-Farming Substation (Moro). May 24. A precipitation of .39 of an inch occurred in the afternoon of May 17. Maximum temperature for the week, 78 degrees (May 22); minimum, 37 (May 18). The unusually cold weather which lasted from May 10 to 20 moderated about May 21, since which time the daily maximum temperatures have been above 70 degrees. High temperatures and favorable moisture conditions of the past few days have made a very noticeable change in the spring grains. Some of the plats are irregular in stand due to damage by wire worms, but the majority are sufficiently advanced to escape further injury. The earliest plantings of corn and sorgos are above ground, the corn having made a good stand. Alfalfa is again above ground, after damage by the hail storm, with prospects of a good thick stand of all varieties. Winter rye is beginning to head. The field peas injured by the hail have started to grow again. A date-of-seeding test of corn was planted during the week. The work of fencing, and of preparing the land for summer fallow was continued.

June 1. On May 26 and 27 an unusual precipitation of .7 of an inch occurred, making a total precipitation for the month of 2.27 inches -- the largest for the month of May since 1903. Following the rain, the maximum temperature for two days was but 61 degrees. Since then, the weather has moderated, the maximum termperature for the week (and also for the season) of 83 being reached on May 31. Apparently, the only winter grains which it will be worth while to harvest are 1 plat of Fortyfold wheat, and the 3 plats of Turkey wheat (C. I. 1558) sown in the

environmental tests. All spring grains are growing rapidly. Rye is beginning to head. All corn varieties are up, with a good stand. Some of the grain-sorghums and sorgos are up, but the stand is generally thin and irregular. The erection of a barbed-wire fence around the station is completed. Late plowing of the plats devoted to tillage experiments is also completed. Because of the prevalence of Russian thistles and tumbleweeds it will be necessary next week either to replow or double disk the plats of winter wheat on which the stand is thin.

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NEWSLETTER

OF THE

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U. S. DEPARTMENT OF AGRICULTURE.

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Volume V.

JUN 13
1913

June 13, 1913.

NOTICE TO FIELD MEN.

The telegraphic expense of the Office amounts approximately to $125.00 annually. Attention is again called to the frequent use of unnecessary words in telegrams. Messages to the Office should be addressed simply "C. R. Ball, Agriculture, Washington, D. C.", NOT "C. R. Ball, Office of Cereal Investigations, Plant Industry, Department of Agriculture, Washington, D. C." Care should also be taken to limit the text of telegrams to necessary words only.

OFFICE NOTES.

Mr. Derr returned on June 7 from a short field trip through the Southern States.

Mr. W. M. Carne, of the Department of Agriculture, Sydney, N. S. W., Australia, who is especially interested in the grazing problems in the Southwestern States -- particularly New Mexico, Arizona and California -- was a visitor to this Office on June 12. Today, Mr. Carne expects to examine the cereal work conducted by this Office on the Arlington Experimental Farm.

A manuscript entitled "Kafir as a Grain Crop", by Messrs. C. R. Ball and B. E. Rothgeb, was submitted on June 12 for publication as a Farmers' Bulletin.

B.P.I. Bulletin No. 283, "Cereal Experiments in the Texas Panhandle", by John F. Ross, of this Office, and A. H. Leidigh, now of the Kansas Agricultural Experiment Station, was issued on June 9.

FIELD NOTES

VIRGINIA:

Arlington Farm Cereal Work. June 11. Weather the past week has been dry and cold. The minimum temperatures for June 9 and 10 were 45 and 42 degrees respectively. Considerable leaf rust has developed in the wheat during the past week. Harvesting

of the earlier varieties of winter oats is in progress. Buckwheat and prosos were seeded on the 7th; also the grain sorghums in the environmental experiments.

NOTE: The statement with regard to the short crop of oats at the Arlington Experimental Farm, in Newsletter of June 6, should have been limited to the spring varieties. The crop of winter oats which is now being harvested is the best which has yet been grown on this farm. The straw is from 3 to 4 feet in height, and there is every indication of good yields of grain of high quality.

TEXAS:

Amarillo Cereal Field Station. June 7. Range in temperature for the past week, from 56 to 92 degrees. Total precipitation, .76 of an inch. Field plats of winter rye are apparently at full heading stage. Those of winter wheat are beginning to head. Winter barley C. I. 257 ranks next to the rye in size and growth. Spelt and emmer have made good growth, but as yet show little signs of heading. The spring wheats are heading uniformly. The lower leaves of the wheat plants are dead, but the upper parts of the plants are green and vigorous. Oats have made slow growth the past week. In the nursery, the B, C and D plats are heading nicely. The cooler weather prevailing the past week has been beneficial. Mr. Cron, of the Office of Forage Crop Investigations, has practically completed his plantings, and it is expected that those made just before the rains of last week will germinate quickly.

A Farmers' Institute meeting, including a basket dinner, was held at the station, on June 7. Owing to showers and threatening weather, only about 25 attended the afternoon meeting. After the visitors were shown something of the work on the farm, a talk was made by Mr. John F. Ross, and an open conference followed.

KANSAS:

Hays Branch Station. June 7. A precipitation of 1.3 inches occurred on June 5 and 6. This will be of great benefit to the grains, which were suffering considerably from the drought. The wheat on fallowed ground, which showed the least injury from drought, is looking well since the rain and promises excellent yields. Corn is looking well and making good growth. Fallowed ground will be worked next week to kill the growth of weeds since the rain.

Mr. Kiene was unable to attend the meeting of the Kansas Dry Farming Association at Garden City on June 4 and 5 owing to the illness of his son. The men from the station who did attend report a very profitable trip, but poor attendance, although the program was very interesting and the speeches well delivered. Mr. W. W. Burr of the North Platte Substation, who was present at the meeting, returned with the men from the station and is still here.

COLORADO:

Akron Experiment Farm. June 7. Weather continues very dry. Maximum temperature for the week, 87 degrees; minimum, 47 (both on June 3). Precipitation, .24 of an inch. Winter grains are beginning to head; also Blackhulled barley C. I. 878, a spring variety. Flax, buckwheat and proso, and some of the sorghums, are above ground, and in need of moisture to insure good stands. All planting is completed. Plats have been trimmed and the nursery hoed. The area sown to cereals this year in the investigations of the Office of Cereal Investigations, is approximately 12.6 acres, about .6 of an acre of which is seeded to head-rows and rod-rows of nursery grains. Dr. H. L. Shantz (of the Office of Alkali and Drought-Resistant Plant-Breeding Investigations) and family arrived at the station on June 5.

WYOMING:

Cheyenne Experiment Farm (Archer). June 8. Maximum temperature the past week, 85 degrees; minimum, 40. Precipitation, .25 of an inch. Crops are looking well and growing rapidly. The latest seedings have emerged. A few of the thickly-seeded plats in the rate-of-seeding tests began to show signs of wilting during the week.

Mr. Jones recently visited certain sections of Northern Colorado, and reports that in most of the places visited crops were looking well. Some of the alfalfa in the irrigated areas is now being cut. The several dairy farms encountered had good dairy barns and silos, the latter being highly praised by the dairymen.

SOUTH DAKOTA:

Bellefourche Experiment Farm (Newell), June 7. Favorable weather continues. Maximum temperature for the past week, 84 degrees; minimum, 36. Total precipitation, .87 of an inch, with prospects for more rain. This will maintain a good supply

of moisture for the small grains. All crops are growing rapidly. Spring grains are now about 6 inches tall. Winter rye had headed at a height of about 4 feet. Winter wheat is beginning to head.

Highmore Substation. June 7. High temperatures still prevail. Total precipitation for the past week, about .45 of an inch. This came in the form of a fast, beating rain which resulted in a thick crust which the small grain-sorghum and alfalfa plants, not yet emerged, could not penetrate. This has necessitated the replanting of part of the grain-sorghum work, and has materially injured the stands on other plats. Spring grains average 8 inches in height, and have stooled heavily where thin planting permitted. Winter rye is in full head and promises an excellent yield. Crops are looking well on both the station and surrounding farms. Reports of damage by worms are coming in from all sections, but as yet these pests have not appeared on the station.

Experiment Station (Brookings). June 7. Prof. Champlin reports that he has just completed a circuit of all the substations in South Dakota with the exception of Eureka, and finds crop conditions excellent throughout the State, largely due to plentiful rainfall and cool weather during May. All cereals are looking particularly well. The new field station at Vivian, Lyman County, has been platted preparatory to beginning experimental work.

Prof. Champlin will be one of the instructors at the Teachers' Institute at Pierre during the week of June 16.

NORTH DAKOTA:

Dickinson Substation. June 7. Weather continues hot and dry, with only a trace of precipitation. Maximum temperature for the past week, 86 degrees; minimum 35. The temperature dropped considerably on the 6th, however, and cold weather has since prevailed. Although the ground is quite dry the grains have not yet shown effects of drought. They are, however, making slow growth. Wheat plats in the cultivation experiments have been harrowed and weeded and the alleys between the plats worked.

Williston Substation. June 7. Weather the past week has been slightly cooler than the week before. Maximum temperature, 85 degrees; minimum, 41. Light showers have benefited all crops, particularly the flax seeded within the past two weeks. In spite of the cool weather all crops are making excellent progress, and the late-sown crops have germinated well. Some of the early strains in the wheat nursery are 8 inches high. Alfalfa on the station is now being irrigated.

IDAHO:

Aberdeen Substation. June 9. On June 6 a precipitation of .5 of an inch occurred, accompanied by hail which considerably damaged the crops. The legumes on both dry and irrigated land suffered most, wheat and barley being the least injured. All alfalfa plantings on dry land must be reseeded because the crust formed by the hard, beating rains will not allow the tender plants to emerge. The clovers seeded two weeks ago have not entirely emerged. On the irrigated land, the first irrigation will be given spring grains the latter part of the week. Oats and barley have made better stands on the irrigated than on the dry land.

UTAH:

Nephi Substation. June 8. Weather for the past week has been warm and dry. Potatoes, peas and corn are just emerging. Winter grains are just coming into the boot. Spring grains are making good growth.

Mr. Cardon addressed the meeting of the Utah-Idaho Millers' and Grain Dealers' Association held at Salt Lake City, on June 6 and 7, the sessions of June 7 being held in connection with the Utah Dry Farmers' Association. He urged the farmers of the State to cooperate with the State Experiment Station in the production of pure seed, as a result of which a committee was appointed to meet with the College and Station officials to consider the question of organization along the lines suggested.

The members of the Utah Dry Farmers' Association plan to visit the Nephi Substation early in July.

CALIFORNIA:

Biggs Cereal Field Station. May 31. All rice is planted and growing nicely. Bird-seed grass is giving considerable trouble on the station. On the submersion of the land the water does not immediately affect it. Water will be delivered to the station through the new lateral before June 7. Many planters in the vicinity are complaining of thin stands of rice.

Plant Introduction Garden (Chico). June 7. Weather the past week has been favorable for the ripening of grains. Precipitation amounting to about .5 of an inch was received on

May 27. Maximum temperature for the season has been 101 degrees. Grains are ripening much slower this year than last, due to the absence of extremely hot weather and accompanying hot north winds. About one-half the grains have been harvested, and the remainder will probably be harvested next week.

OREGON:

Harney Branch Station (Burns). June 2. Mr. Breithaupt reports that the season has been very backward. Frosts occurring between May 13 and 15 considerably damaged the spring grains and some of the pea varieties. Winterkilling was very slight in all wheat plats with the exception of one variety. Winter rye also suffered very little, and is now in process of heading. Winter emmers and barleys winterkilled very largely. Very little precipitation has occurred the past month. All grains are up and looking well. Practically all plantings are completed.

Received too late to be inserted in proper sequence:

MONTANA:

Judith Basin Substation (Moccasin). June 8, No precipitation has occurred this week. There is still plenty of moisture in the soil, however, and all crops are making rapid growth. Maximum temperature, 81 degrees; minimum, 44. A twelve mile wind has been blowing since June 7.

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NEWSLETTER

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Volume V.

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June 20, 1913.

OFFICE NOTES

Doctor Leighty was in New York City on Tuesday as a witness for the Government in a suit to recover customs duties from certain importers of a cereal product known as Grünkorn or Grünkern.

FIELD NOTES

VIRGINIA:

Arlington Farm Cereal Work. June 18. A severe electrical storm, accompanied by high winds and a precipitation of .91 of an inch, occurred on June 16. This rain has been very beneficial to growing crops, as it is the first precipitation worth mentioning which has occurred this month. Maximum temperature for the week, 96 degrees (June 16) minimum, 54 degrees (June 12). Prevailing hot weather has caused winter wheats to ripen rapidly, many plats being now ready for harvest. Harvesting of oats and thrashing of barley are in progress. Mr. W. H. Carne, of the Department of Agriculture, Sydney, N. S. W., Australia, visited the station on the 12th and manifested considerable interest in the cereal work.

LOUISIANA:

Crowley Rice Experiment Station. June 14. Weather the early part of the week was quite cool, the temperature rising toward the end of the week. Maximum temperature for the week, 91 degrees (June 8); minimum, 53 (June 13). Precipitation, .74 of an inch (8th and 9th), followed by cold north and east winds. It is feared that, unless rain falls soon, salt water will back up into the streams from which water is secured for irrigation purposes.

TEXAS:

Amarillo Cereal Field Station. June 14. Weather the past week has been cool and cloudy. Total precipitation, .89 of an inch. Total precipitation for June, 1.65 inches. Temperatures for the week: maximum, 83 degrees; minimum, 51. The small grains are making good growth and in general are heading nicely. With the exception of some dead leaves at the base, the plants are normal in color and apparently thrifty. In the date-of-seeding tests of sorghums, a late planting was made on the 13th. The soil was in excellent condition, which should insure rapid and uniform germination. Early plantings of these tests are looking well and making good growth. Mr. Ross was absent from the station on two days' annual leave this week, attending the convention of the I. O. O. F. at Claude, Texas.

The precipitation this month has been in the form of light showers, which has done little good except to lessen the hot winds. Farmers are becoming discouraged.

KANSAS:

Hays Branch Station. June 14. Weather the past week has been cool, with several good showers which have been of great benefit to crops. Some of the grain sorghums have been replanted the hast week; the others are doing fairly well. Field plats of sorghums, which failed on account of deep listing and poor physical condition of the soil, are now being replanted. Weeds are giving a great deal of trouble, but are being pretty well kept down.

IOWA:

Experiment Station (Ames). Prevailing cool weather has helped the small grains considerably, and all crops are looking as well as could be expected. Winter wheat is about to head, and oats will very soon reach this stage.

COLORADO:

Akron Experiment Farm. June 12. Since June 9, the weather has been very cold and cloudy, with strong south winds, which, at times, averaged 16 miles per hour. Little precipitation has occurred, and the grains are wilting badly, particularly the winter grains, which are just now in the heading stage. It is doubtful whether they will recover, even with rain at an early date. Most of the spring grains and the nursery are still in fair condition.

June 14. Weather has returned to normal with but little precipitation. Should rain not fall in the next few days, crops will be practically a complete failure. Spring grains are wilting and burning, while winter wheats, which are almost completely headed, are in bad condition. Spring oats and barley, from 6 to 10 inches high, are beginning to head.

WYOMING:

Cheyenne Experiment Farm. (Archer). June 15. High temperatures and increased wind velocity (averaging at times as high as 17 miles per hour) are rapidly drying out the soil. Precipitation for the past week, .13 of an inch. Maximum temperature, 88 degrees (June 14); minimum, 38 (June 12). The use of the weeder on wheat, oats, and barley the past week formed a loose mulch on the surface of the soil which will probably reduce evaporation to some extent.

SOUTH DAKOTA:

Bellefourche Experiment Farm (Newell). June 14. Weather the past week has been favorable to crop growth and field work, except for the strong winds during the first few days. Blowing of the soil from an adjacent fallow series slightly damaged the oat varieties. A precipitation of .57 of an inch occurred on the 13th. The grains are not suffering from lack of moisture, but rain would be of benefit to winter wheat, which is just heading. The high temperatures which preaviled the previous week damaged winter rye, which was then heading. A large percentage of the florets seem to be sterile, having the same appearance as those found last year in rye and durum wheat, and to some extent in other wheats. It is impossible at present to estimate the extent of the damage.

NORTH DAKOTA:

Dickinson Substation. June 14. High winds from the southeast prevailed for five days the past week, causing a slight burning of the crops. A precipitation of .47 of an inch on the 13th, however, checked the damaged being caused by the winds, and benefited the crops. All grains are making rapid growth.

Williston Substation. June 14. Weather has been hot and dry the past week, and the small grains are showing the effects of this condition. Maximum temperature, 90 degrees; minimum, 50. Precipitation very slight. Winter wheat on irrigated land is heading, and that on dry land will soon begin to head. Two of the early spring wheats in the nursery are also heading. In the field plats of winter wheats, Buffum's No. 17 (C.I.3330), shows 60 per cent winter survival, the highest for all winter wheats. These plats were seeded in standing corn.

CALIFORNIA:

Biggs Cereal Field Station. June 14. Weather the past week, fair and cool, with no precipitation. Maximum temperature, 91 degrees (June 12); minimum, 54 (June 8). Rice is growing slowly, due to the cool weather. The plants are from 9 to 14 inches high, averaging about 12 inches. The Italian rice is growing faster and looks better than the other varieties. Rice on neighboring farms is not looking as well as that on the station.

OREGON:

Eastern-Oregon Dry-Farming Substation (Moro). June 7. The first three days in June were unusually warm. The maximum temperature for the week, 88.5 degrees, was recorded on June 1; minimum, 41, on June 4. Total rainfall, .27 of an inch, on June 6 and 7. This was of little benefit to the crops, as it was followed by strong winds. Since the rain the temperature has been lower. Some of the grains on the continuously-cropped plats in the rotation and tillage experiments, as well as some of the varietal plats of wheats and barleys which made a thick stand, are beginning to turn yellow from lack of moisture. The sudden changes in temperature have had a bad effect on many of the grains, which is most apparent in the barleys which had begun to head. Considerable trouble is being experianced in keeping out weeds, three men being constantly at work in an effort to eliminate them.

June 14. Weather the past week, in striking contrast to that of the week before, has been unusually cool for this season of the year. High winds have prevailed daily. Maximum temperature for the week, 79 degrees (June 12); minimum, 37 (June 13). This is the lowest temperature recorded for several weeks. No precipitation has occurred. The cool weather has benefited the growing crops. Rain is needed, as the soil moisture is not very plentiful and the grains are beginning to head. Grains sown on land cropped last year are also in need of moisture.

During a short trip through the southern part of Sherman County some good fields of winter wheat were seen and some which had been practically ruined by rank growths of weeds. Nearly all grains sown on properly tilled summer-fallowed land looked well. Tumbling mustard is spreading with remarkable rapidity throughout this section. On many large fields sown to both spring and winter grains there were good thick stands of this weed from 4 to 5 feet tall and in bloom. Farmers are still engaged in preparing the land for summer fallow. In the large winter wheat section neat kent, where Fortyfold is almost exclusively grown, the practice is late plowing without surface cultivation. Few of the fields prepared for summer fallow had been harrowed. The area in wheat is less this year than that of last year

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NEWSLETTER

OF THE

OFFICE OF CEREAL INVESTIGATIONS,

BUREAU OF PLANT INDUSTRY,

U. S. DEPARTMENT OF AGRICULTURE.

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U. S. Department of Agriculture

Volume V.

JUN 27
1913

June 27, 1912.

NOTICES TO FIELD MEN

Expenditures for Fiscal Year 1913

If it is not possible to transmit promptly the remaining vouchers for expenditures for the fiscal year 1913, field men and members of the Office staff now on field trips are requested to send in, immediately after June 30, the total amount of outstanding liabilities.

Supplies Needed for Fiscal Year 1914

The Office desires to be advised as to the approximate quantity which will be needed during the fiscal year 1914 of the following articles, giving sizes and full descriptions where applicable:

Botanical blotters for herbarium specimens.
Cloth bags for mailing grain.
Manila envelopes (other than correspondence size).
Tags and labels.

Such information will enable the Office to supply field requests promptly. Delays of from one to two months sometimes occur in obtaining such supplies to fill an unexpected order.

Authorizations for Fiscal Year 1914

Since January 1 the issuance of letters of instructions has been discontinued. Authorizations issued will not specify details, but will contain the clause "in accordance with the Fiscal Regulations of the Department." It is well, therefore, to become familiar with the Fiscal Regulations on all points which are applicable to your line of work.

Forms for Fiscal Year 1914

The use of Form 13 voucher, "Delivery Invoice", will be discontinued during the year 1914. So far as is known, this is the only change in the forms of vouchers which will affect field men.

Signatures to 1914 Accounts

Please note the manner in which your name is written in your 1914 authorization, and, in sending in accounts, sign vouchers accordingly.

FIELD NOTES

VIRGINIA:

Arlington Experimental Farm. June 25. Maximum temperature for the past week, 93 degrees (June 20); minimum, 58 (June 19). Total precipitation, 1.17 inches. This came in the form of local daily showers, seriously retarding the harvesting of wheat and winter oats. Many of the winter wheats are now fully ripe, and the straw and chaff have been badly discolored by the prevailing humid conditions. The quality of the grain, however, will not be damaged, if the weather permits harvesting in the next few days. Late varieties of winter oats are also fully ripe.

LOUISIANA:

Crowley Rice Experiment Station. June 21. Maximum temperature for the week, 95 degrees (June 19); minimum, 64 (June 15). Variable winds have prevailed. Total precipitation, 1.03 inches, on the 15th, 16th and 17th. There have been heavy rains south of the station, and it is hoped that more rain will fall here. The prevailing warm weather has caused rapid plant growth.

TEXAS:

Beaumont Cooperative Rice Experiment Station. June 21. Press reports state that rains which fell during the early part of the week partly relieved the drought that had begun to be felt in all parts of the rice belt, but flood rains are needed on the coast to fill the streams subject to salt water invasion. Salt water is present in most of the large streams on the coast from which water is drawn for irrigation, and brackish water has appeared at some of the pumps.

TEXAS:

Amarillo Cereal Field Station. June 21. Maximum temperature for the past week, 90 degrees; minimum, 56. Total precipitation, .56 of an inch. In the date-of-seeding tests with grain sorghums, the late planting has emerged. Some of the field plats of the small grains are fully headed and all plats are at least 50 per cent headed. Burt oats (C. I. 293) are beginning to ripen. In the nursery, all plants are looking vigorous and thrifty, and the earliest selections of oats and barley are ripening. Extra labor has been employed the past week in ridding the farm of weeds.

KANSAS:

Hays Branch Station. June 21. Weather the past week has been somewhat cool. Total precipitation, 1.5 inches. Grasshoppers are doing considerable damage at the station. Paris green is being used in an attempt to exterminate them, and the hopper-doser will soon be employed also. To date, chinch bugs are not causing much trouble. Oats sown on Mar. 24 are beginning to ripen. Wheat will not be ready for harvest before July 1. The early barleys have suffered to some extent from the drought, and indications are that the later varieties will be the better. It is reported that harvest has begun to the south of the station, and also in the eastern past of Ellis county.

Mr. Ball spent June 20 on the station, leaving in the evening for Manhattan, Kans.

COLORADO:

Akron Field Station. June 21. Weather the past week has been warm, with but little precipitation at the station, although heavy rains have occurred in this vicinity. Partial cloudiness seems to have been of some benefit in preventing excessive evaporation. Maximum temperature for the week, 95 degrees; minimum, 52. Spring grains are still in fair condition, but winter grains have been badly damaged by the drought. Winter grains and early varieties of spring wheat, oats and barley, are fully headed. Unless timely precipitation occurs, it is doubtfull whether these grains will fill.

WYOMING:

Cheyenne Experiment Farm (Archer). June 22. Maximum

temperature for the past week, 89.5 degrees; minimum, 45. Greatest daily range, 42.5 degrees (June 16). Total precipitation .74 of an inch, in the form of rain and hail. Corn, flax and peas appear to have sustained more damage from the hail than other crops. Three plats of barley (Blackhull, California Feed and Gatami) were also considerably damaged, due to the fact that they were just beginning to head. The rain was beneficial, as the crops had begun to show the effects of drought. Winter wheat and a few of the spring barleys are beginning to head.

SOUTH DAKOTA:

Bellefourche Experiment Farm (Newell). June 21. Maximum temperature for the past week, 85 degrees; minimum, 48. A hail storm occurred on June 16, accompanied by a rainfall of .41 of an inch. The hail caused considerable damage to the early oats and barley which had just begun to head, and to winter wheat and rye which were headed. Damage to winter wheat was between 10 and 15 per cent; that to winter rye, fully 75 per cent. This, together with the prevalence of sterile florets in the rye, will probably reduce the yield to the quantity of seed sown. It is probable that a good crop of winter wheat will be obtained. Barley and spring wheat on land which was cropped last year are showing the effects of drought. Crops on fallowed land are looking well. Spring grains below the ditch will probably be irrigated early next week.

Prof. Manley Champlin reports from Redfield, S. Dak., under date of June 21, that local showers have prevailed during the week, and probably two-thirds of the State is well supplied with moisture. In many places, where small grain has followed small grain, the crops show lack of sufficient moisture. All small grains sown in corn stubble are looking well. Corn enters into the rotations this year to a greater extent than is usual.

NORTH DAKOTA:

Dickinson Substation. June 21. Weather the past week has been ideal for plant growth. Maximum temperature, 88 degrees; minimum, 48. Total precipitation, .78 of an inch.

Winter wheat and early varieties of barley and oats have begun to head. Spring wheat is about a foot high and will soon begin heading. This has been "Alfalfa Day" at the station. About 150 visitors, representing 7 counties, examined the crops. Superintendent W. A. Peterson and Mr. M. Pfaender of the Mandan Substation (Dry Land Agriculture), and Mr. J.S. Cole, also of that Office, were among the visitors.

Williston Substation. June 21. Weather the past week has been unusually hot, with a total precipitation of only .31 of an inch. Small grains are showing the effects of drought. The field plats, being on summer-fallowed ground, do not show the effects of drought as badly as some of the rotation plats on ground cropped last year. Wheat sown on these summer-fallowed plats looks better than oats, barley, or flax. Winter wheats, Sixty-Day oats and Gatami barley are heading. A nursery row of June oats (C. I. 644) is in full head, being considerably in advance of Sixty-Day.

President Worst of the North Dakota Agricultural College was a visitor at the Station on June 19. Mr. E. W. Hall, Local Manager for the Better Farming Association, arrived this week to take up his work in this county. He expresses a desire to cooperate with the station in every way possible, and purposes to create a greater interest in the station work among the farmers and to encourage them to visit the station. He also desires to assist in placing seed of the best adapted grains in the hands of reliable farmer cooperators.

MONTANA:

Judith Basin Substation (Moccasin). June 16. Weather the past week has been favorable to plant growth. Maximum temperature for the week, 82 degrees; minimum, 41. Total precipitation, 2.19 inches, of which 1.15 inches fell on June 12. The acre plats and the 20-acre increase field of early-seeded winter wheats are beginning to head. Winter wheat throughout this section is in good shape, and prospects are favorable for good yields this year.

June 23. Weather is unsettled and stormy. Total precipitation the past week, .71 inches. Maximum temperature, 74 degrees; minimum, 46. All crops are growing rapidly. Winter wheat is heading rapidly, some of the earlier seedings being fully headed. Of the spring-sown crops, Mariout (C. I. 261) and Beldi (C. I. 190) barleys are beginning to head. Rain is delaying the plowing of fallow ground, but it is hoped that this may be completed in a few days. A very

good crop of alfalfa grown without irrigation has been obtained, and cutting will begin this week.

UTAH:

Nephi Substation. June 14. Maximum temperature for the past week, 84 degrees; minimum, 37. Total rainfall, .21 of an inch, which soon evaporated. Most of the winter grains are just beginning to head, but a few are about 50 per cent headed. Spring grains are growing nicely. Fair stands of corn, peas and potatoes have been obtained, but drought is preventing rapid growth. Alfalfa is now being cut, and fair yields are expected.

Some of the farmers in this section, whose wheat winter-killed to a large extent, are plowing their fields and preparing them for fall seeding. It is believed that this practice will prove more profitable than to allow the present poor crops to mature. The majority of the farms, however, will probably mature good crops.

June 21. Weather the past week has been warm. The maximum temperature for the week, 91 degrees, (June 21), is the highest yet recorded this year. A precipitation of .23 of an inch, which fell on June 17, will be of material benefit to spring crops, as it was immediately absorbed by the soil. This rainfall is a little late, however, to be of much benefit to winter crops. All winter cereals are heading rapidly. Some of the fall-sown barleys and durum wheats in the nursery are looking well. Plats of Sixty-Day oats are beginning to head, though the culms are not over a foot high. An excellent stand of potatoes has been obtained on the plats, but the stands of corn and peas are not so satisfactory. Beans planted May 1 have not yet emerged. The first cutting of alfalfa is in the stack and in good condition. The entire field has been freed of weeds, and is now in good shape.

OREGON:

Eastern Oregon Dry-Farming Substation (Moro). June 22. Weather the past week has been moderately warm with considerable wind. Maximum temperature, 85 degrees (June 18); minimum, 39 (June 19). A precipitation of .71 of an inch occurred June 21, the first since May 26 which has been of benefit to growing crops. All grains in the tillage and

rotation experiments on ground which was sown to grain last year burned rapidly during the week, and the rain of June 21 will not revive them. Field peas, which were all planted on ground that grew this crop last year, have stood the drought remarkably well. They are now in full bloom and promise to yield well. All grains on summer-fallowed land, most of which are now heading, are doing nicely and will be greatly benefitted by the recent rain. One-and-a-half acres of alfalfa sown last year have been cut for hay, the yields of the various plats ranging from one-half to three-fourths of a ton per acre. About two acres of this crop are being left for seed. Perfect stands have been obtained on most of the plats in the three acres of spring-sown alfalfa.

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Volume V.

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JUL 5
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July 5, 1913.

OFFICE NOTES

Mr. Warburton left Washington on July 1 on a trip to the West in the interests of oat investigations, his itinerary including points in Iowa, Nebraska, Wyoming, Idaho, Oregon, Washington, Montana, North Dakota, Minnesota and Illinois. He expects to be gone about two months.

Dr. Leighty left Washington on July 2 on a trip in the interests of wheat investigations in the humid areas, and expects to be away about one month. He will visit points in West Virginia, Kentucky, Missouri, Iowa, Illinois, Indiana, Ohio, Pennsylvania, and New York.

FIELD NOTES

VIRGINIA:

Arlington Experimental Farm. July 2. Weather the past week has been unusually hot, with no precipitation. Maximum temperature for the week, 98 degrees (July 2); minimum, 69 (July 1). Harvesting of winter wheat is nearly completed, only a few nursery rows of late-maturing sorts remaining.

LOUISIANA:

Crowley Rice Experiment Station. June 28. Weather the past week has been favorable to growing crops. High temperatures have prevailed, the maximum being 91 degrees (June 25) and the minimum 70 (June 23). Total precipitation, 1.68 inches. This has benefited the crops, but more rain is needed.

TEXAS:

Beaumont Cooperative Rice Experiment Station. June 28. Weather the past two weeks has been too cool for growing rice. Salt water is reported at Labelle, Texas, and it is feared that other sections may suffer. Beaumont is putting forth great effort to make the coming convention of the Southern Rice Growers' Association a great success.

Amarillo Cereal Field Station. June 28. Maximum temperature for the week, 96 degrees; minimum, 57. A 10-mile wind has prevailed during the greater part of the week, and only a trace of precipitation has occurred. In the nursery the plants are heading nicely at the following approximate heights: winter wheat, 23 inches; spring durum wheats, 21-29 inches; common spring wheats, 18-23 inches; oats, 18-25 inches; barleys, 8-18 inches. A new cultivator has been purchased for use on the station farm. Mr. C. R. Ball inspected the station on June 24. Mr. W. W. Burr of the North Platte Substation, Nebraska was a visitor here on June 28.

KANSAS

Hays Branch Station. June 28. No precipitation has occurred the past week. Grains have ripened rapidly the past few days. Barley, rye, some of the wheat varieties, and the tillage plats are cut and in the shock. Corn is doing well on both the upland and bottomland; some of the varietal tests are being thinned to an even stand. Harvesting of wheat is in progress.

COLORADO

Akron Field Station. June 28. Weather still continues very hot and dry with the exception of a precipitation of .51 of an inch on June 24. Winds averaging 16 miles an hour prevailed on June 26 and 27. Maximum temperature, 97 degrees (June 28); minimum, 52 (June 22). Varietal plats of grain on summer-fallowed land appear to be in better condition now than they were a few weeks ago. The thin stand of the spring grains doubtless accounts for their better appearance at this time. Rain in the immediate future would still be in time to benefit spring grains, especially oats and barley. All small grains are more or less blighted. Much of the grain in the rotation experiments is a total failure. The field plat of Tennessee Winter barley (C.I. 257) is almost ripe and apparently well filled. Many of the spring grains are fully headed, while others have begun to head. Late nursery plantings are also beginning to head.

IOWA

Experiment Station (Ames). June 27. Prof. L. C. Burnett reports that several rainstorms have occurred recently, causing winter wheat to lodge to some extent but not so badly as last year, while only a few of the softest strawed oats have lodged.

WYOMING

Cheyenne Experiment Farm (Archer). June 28. Maximum temperature the past week, 90 degrees; minimum, 48. Only a trace of precipitation has occurred. Winter wheat plats are heading rapidly. Of the barleys, Blackhull (C.I. 878), Gatami (C.I. 575), and California Feed (C.I. 690) are in the heading stage. In the nursery, the only grain headed is the June oat (C.I. 710). Tenth-acre plats of oat varieties are making slow growth. The prevailing warm weather is causing rapid growth of the corn varieties. Mr. C. R. Ball, and Messrs. Vaughn and Hastie, members of the Wyoming Board of Farm Commissioners, visited the station on June 27.

SOUTH DAKOTA

Bellefourche Experiment Farm (Newell). June 28. Maximum temperature for the week, 98 degrees; minimum, 49. No precipitation has occurred since June 16. All small grains are needing moisture. Those on land cropped to small grains last year will soon be past recovery. In view of the scanty moisture supply, winter wheats are doing well. All grains below the ditch will be irrigated the coming week.

Highmore Substation. June 21. No precipitation has occurred for about 3 weeks. Prevailing winds and high temperatures, together with lack of rainfall, will greatly reduce yields. Many of the grains are heading prematurely, the heads being badly dwarfed. Every effort is being made to keep a mulch on the surface of the plats and to free them from weeds. Winter rye is still looking well, and promises a fair crop. Corn and grain sorghums are profiting by the continued high temperatures and are slightly beyond normal growth for this time of the year.

June 28. Weather the past week has been hot, with high winds prevailing at times. A precipitation of .36 of an inch occurred early in the week, but the intense heat soon evaporated the moisture so that it was of practically no benefit. Condition of the crops on the general field plats

and the hundredth-acre plats is very serious. Even if rain should fall, but few plats would revive. It is interesting to note that those plats receiving applications of commercial fertilizers were the first to show the effects of drought. Grains seeded on ground cropped to corn last year are still in good condition. Some interesting results are expected from the rate-of-seeding tests with winter rye. Dr. A. N. Hume, of the South Dakota State College, visited the station on June 28.

Prof. Manley Champlain reports from Faulkton, S. Dak., under date of June 25, that, in traveling over the greater portion of Spink and Faulk Counties, he observed that small grains sown on well-cultivated corn lands looked better than other seedlings; small grains on land disked and spring-plowed had a better appearance than those on fall-plowed land; thin-seeded grains were withstanding the drought better than those thickly seeded; Bearded Fife appears to be the most promising wheat variety for dry seasons; barley seeded at the rate of 3 pecks per acre has proved a satisfactory nurse crop for alfalfa; and that owing to continued dry weather this season very little rust and smut are present. Much of Prof. Champlin's traveling over Spink county was done in company with Mr. J. E. Larson, Superintendent of the Spink County Farm Improvement Association. Mr. Larson is encouraging the building of silos and the planting of alfalfa.

Experiment Station (Brookings). June 30. Prof. Champlin reports that crops in the central portion of the State are in a critical condition from lack of sufficient rainfall. Unless rain falls within a day or two the farmers will suffer heavy losses.

NORTH DAKOTA

Dickinson Substation. June 28. Weather the past week has been hot and dry. Maximum temperature for the week, 100 degrees; minimum, 48. Total precipitation, .30 of an inch. This came in the form of light showers on June 27 and 28, the accompanying cloudy weather checking evaporation and allowing the rainfall to be of great benefit to crops. Grains are making rapid growth. Early varieties of oats and barley are in full head. Spring wheats are beginning to head. Large numbers of crosses of winter wheats are being made with a view to securing hardier strains than those now grown. Dr. Humphrey visited the station on June 28 and inspected the cereal work, finding many interesting specimens of cereal diseases.

Williston Substation. June 28. The long continued drought was broken by a rainfall of 1.11 inches on June 27. Total precipitation for the week, 1.16 inches. Maximum temperature, 95 degrees; minimum, 46. The drought had so thoroughly depleted the moisture supply in the light soil and in the continuously-cropped soil that many of the early-seeded crops made but slight recovery. Most of the grains are heading, winter wheat and Manchuria wheat (spring,--C.I. 2492) being fully headed.

On a trip to Trenton, about 14 miles to the west of the station, it was noted that much of the wheat, oats and barley is heading at a height of 6 to 12 inches. Later-seeded grains are, in most instances, looking well, and good yields will probably be obtained.

MONTANA

Judith Basin Substation (Moccasin). June 30. Weather the past week has been stormy. Total precipitation for the week, 1.45 inches; for the month , 4.45 inches. Maximum temperature for the week, 76 degrees; minimum, 46. All crops are growing nicely. The barley varieties are heading rapidly, and Sixty-Day oats are beginning to head. Some of the winter wheat is now over 4 feet high.

IDAHO

Aberdeen Substation. July 1. Continued warm weather with additional rainfall has materially benefited all crops. Precipitation for month of June, 2.33 inches. All Turkey wheats and many of the spring barleys are in full head. A few varieties of the hard wheats have reached the soft dough stage. Flax is now in full bloom. Alfalfa has been reseeded, is emerging, and making an even stand. The sweet clover planted on the dry farm beside the alfalfa has made more than three times the growth of the latter. Rye and peas in the green-manuring experiments have been turned under and the recent rain will aid materially in causing their decay.

UTAH

Nephi Substation. June 28. During the past week showers of from .10 to .20 of an inch have occurred every day, with prevailing cloudiness. This rain came in good season. to enable winter grains to fill properly, as they are all fully headed. It has also been of benefit to spring-sown crops.

Newly-fallen snow can be seen on the mountains to the east, and a slight hail storm occurred in the valley on June 24, but no freezing temperatures have been recorded. Rain storms have been general over the entire Stata, and have been of material benefit to dry-farmed crops. Alfalfa in the cock was damaged to some extent by the rains.

CALIFORNIA

Biggs Cereal Field Station. June 21. Weather during the first part of the week was too cool for growing rice, but the last three days have been warmer. Maximum temperature, 96 degrees (June 21); minimum, 52 (June 15). Rice looks well but is making slow growth. Grass continues to grow rapidly; it is difficult to get labor to weed the plats; and wages for this work are high.

During the week visits were made to practically all the rice plantations in the Sacramento Valley with the exception of those on the Sacramento River near Colusa. Most of the fields look well, but many are quite late.

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NEWSLETTER

OF THE

OFFICE OF CEREAL INVESTIGATIONS,

BUREAU OF PLANT INDUSTRY,

U. S. DEPARTMENT OF AGRICULTURE.

Volume V.

JUL 11

1913

July 11, 1913.

SUMMER MEETING AT NORTH PLATTE, NEBRASKA.

The Great Plains Cooperative Association, composed of employees of the Bureau of Plant Industry conducting work in the State of the Great Plains area and of members of the States Agricultural Experiment Stations conducting cooperative investigations in those States, will hold its annual meeting at the North Platte Substation, North Platte, Nebr., on Tuesday, Wednesday and Thursday, August 19, 20 and 21. Just as far as possible representatives of this Office in the States of the Great Plains area will be authorized to attend this meeting, and announcements to this effect will be made by letter very shortly. Every member should present a scientific paper on some phase of agronomic research in the Great Plains. Titles of papers and the time required for their presentation should be sent at once to the Office and also to Mr. J. S. Cole, #637 Majestic Bldg., Denver, Colo. The meeting will be a joint one with the Great Plains section of the American Society of Agronomy.

REPORTS FOR NEWSLETTER.

Owing to the Saturday half-holidays it becomes necessary to cut the Newsletter stencils on Friday morning and to mail the Newsletter on Saturday forenoon. Men in the Great Plains area should mail their reports without fail on Saturday night, and men west of the Rocky Mountains should mail their reports on Friday night, during July to September, inclusive.

OFFICE NOTES

Mr. Ball returned on July 7 from a field trip during which he visited a number of experiment stations.

Mr. Chambliss expects to leave July 12 on a field trip to the rice farms in Texas, Louisiana and California. He will address the Southern Rice Growers' Association at Beaumont, Texas, on July 16.

FIELD NOTES

VIRGINIA:

Arlington Experimental Farm. July 9. Weather continues

dry, with the exception of very slight precipitation. On July 6 a heavy wind storm, which was accompanied by only a trace of precipitation, blew down much of the grain in the shock. Maximum temperature for the week, 93 degrees (June 5); minimum, 54 (June 8). Should the weather continue favorable, thrashing of all field plats of barley and winter oats will be practically completed by the end of the week.

LOUISIANA:

Crowley Rice Experiment Station. July 5. Total precipitation for the week, slightly more than 1 inch. This extended over a period of four days, and although beneficial to the non-irrigated crops was of little or no value to the canal companies. Heavy rains are needed to swell the streams from which irrigation water is obtained. Mr. J. S. Young of the Department of Agriculture and Forestry, Peking, China, was a visitor at the station this week.

IOWA:

Agricultural Experiment Station. (Ames). July 8. Mr. Warburton reports that the harvesting of winter wheat will be practically completed on July 9. Some of the Sixty-Day, Kherson and Burt oats in the nursery will also be cut on the 9th. A few plats of oats and barley have been harvested. With the exception of the lodging of wheat and some of the late oats, the crops are good. Hot, dry weather is ripening oats very rapidly. Most of the oats grown at Lincoln for purposes of classification ripened too rapidly to permit normal growth but conditions at Ames are better, although the later varieties will not mature satisfactorily.

COLORADO:

Akron Field Station. July 5. Maximum temperature for the week, 100 degrees; minimum, 53. Cloudy weather in the afternoons helps somewhat to reduce the temperature. Winds prevail continuously, but are of high velocity only at times. Continued drought is causing the grain to ripen before it is well filled. Some plats are burning badly. Winter Wheat is nearly ready to harvest. Early varieties of oats are beginning to ripen. Flax is beginning to blossom. Spring wheat, except for a few plats, is in fairly good condition. Intertilled crops are making good

growth. Mr. C. R. Ball inspected the cereal work at the station on July 3.

WYOMING:

Cheyenne Experiment Farm (Archer). July 6. Weather the past week has been extremely hot and dry. Maximum temperature, 96 degrees; minimum, 45. Greatest daily range, 46 degrees. Total precipitation, .31 of an inch. Rain is badly needed. All of the durums and some of the common wheats have begun to head; also the barley varieties. Of the oats, all of which are very short, Kherson, Sixty-Day and Perm are in the heading stage. Corn is growing rapidly, and was cultivated this week for the first time. Mr. L. E. Willey, a graduate of the Montana Agricultural College, arrived July 6 to take charge of the rotation work of the Office of Dry Land Agriculture. A silo is soon to be erected on the farm.

SOUTH DAKOTA:

Bellefourche Experiment Farm (Newell). July 7. A precipitation of more than an inch on June 29 was of great benefit to growing crops, and, unless subsequent unfavorable conditions prevail, will insure a crop of winter wheat. Barleys and the spring wheats in the rate-of-seeding tests were so badly damaged by drought that they are not likely to recover. Winter grains are ripening rapidly and will probably be ready for harvest about the middle of the month. Good yields are expected.

Highmore Substation. July 5. During the past week temperatures have been lower and winds moderate in velocity. A precipitation of .32 of an inch early in the week, followed by cloudy weather, has slightly improved the condition of the growing crops. Winter rye has been cut and promises a fair yield, the 2-peck rate of seeding being best. Early oats and barleys are ripening rapidly, and will be cut next week. Plats of small grains on land planted to corn last year, with the exception of those receiving commercial fertilizers, are looking well; as are also all cultivated crops. Barley and oats planted in triple rows 30 inches apart and double rows 36 inches apart are in excellent condition and promise good yields. These methods of seeding are very interesting to farmers visiting the station, several of whom have indicated

the intention to sow in this way next season. A trip through the surrounding country with a view to learning crop conditions in this vicinity, is planned for the coming week.

NORTH DAKOTA:

Dickinson Substation. July 5. Weather the past week has been favorable to growing crops. Maximum temperature, 80 degrees; minimum, 48. Total precipitation, .63 of an inch. The rainfall for June was 1.77 inches, as compared with a normal of 2.88 inches. Since January first, only 64 per cent of the normal precipitation has occurred. The timely rains and cool weather are enabling the grains to head uniformly, and if favorable weather conditions continue good crops will result, in spite of lack of precipitation.

Williston Substation. July 5. Weather the past week has been favorable to growing crops. Maximum temperature, 79 degrees; minimum, 48. Total precipitation, 1.61 inches, of which 1.23 inches occurred July 4. All small grains are looking well with the exception of some very early-seeded sorts which were beginning to head when rain fell a week ago. It is safe to say that, with few exceptions, most of the grain thought a week ago to be beyond recovery will now make a fair crop. Most of the wheats are in the heading stage, Manchuria (C.I. 2492) being fully headed. The general condition of flax in this vicinity is excellent, that on the station being in full bloom

CALIFORNIA:

Biggs Cereal Field Station. July 5. Maximum temperature the past week, 103 degrees; minimum, 60. Rice on the station is looking well. The rice crop in this vicinity has made good growth, and has a better color during the past week as a result of the warmer weather. Most of the commercial rice is submerged. The general condition of the crop is very good. About half, however, was seeded quite late and favorable weather must be had to mature it. Irrigation from wells is very unsatisfactory, only a few having furnished enough water to be of any service. Of the 17 wells bored in this vicinity only 6 of them furnished enough water for pumping.

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NEWSLETTER

OF THE

OFFICE OF CEREAL INVESTIGATIONS,

BUREAU OF PLANT INDUSTRY,

U. S. DEPARTMENT OF AGRICULTURE.

Volume V.

JUL 18
1913

ADDITIONAL NOTES CONCERNING BIDS COVERING PURCHASE OF STATION SUPPLIES

If a number of articles are to be purchased from one firm on or about the same date, the total cost of which will aggregate $50 or more, (though no single article purchased exceeds $50 in price), bids for the lot must be procured or vouchers must be accompanied by exigency statement showing good reason why bids could not be obtained.

The prompt response of almost every field man to the request to forward to Washington outstanding vouchers for the fiscal year 1913, and to return at once the inventory lists sent out to be checked, is greatly appreciated. This will materially aid the Office to promptly close last year's accounts and to prepare the office inventory.

OFFICE NOTES

Mr. L. M. Estabrook was recently made Chief Clerk of the Department of Agriculture, succeeding Mr. C. C. Clark.

On July 15 Mr. Derr addressed the Rural Life Conference at the University of Virginia Summer School, Charlottesville, his subjects being "Improvement of the Grain Crop," and "Grain in the Crop Rotations of the South."

FIELD NOTES

VIRGINIA:

Arlington Experimental Farm. July 16. Maximum temperature for the week, 93 degrees (July 14); minimum, 58 (July 9). A precipitation of .27 of an inch occurred on July 12. The precipitation to date for July has been but .59 of an inch, and as that for June (2.44 inches) was also considerably below normal, field crops, especially corn and potatoes, are beginning

to show the effects of drought. Progress in thrashing is being temporarily delayed while a new system of electric motors is being installed on the farm.

TEXAS:

Amarillo Cereal Field Station. June 12. Weather the past week has been dry, with no precipitation and hot winds prevailing daily. Maximum temperature, 100 degrees; minimum, 65. Plats of winter rye and barley, and of Burt, Sixty-Day and Seventy-five Day oats have been harvested. Spring grains are 50 per cent ripe. Deihl Mediterranean wheat is ripening in advance of the common winter varieties. In the common wheats orange leaf rust is prevalent, but in the durums but little is found, and that apparently is dependent upon the proximity of these wheats to the common varieties. The second cultivation of sorghum plats occurred this week. The plats have made fair growth, but during the past few days have showed the effects of drought, especially where stands are heavy. A few of the early kaoliangs are beginning to head. In the nursery, the earliest-maturing varieties of oats and barley have been harvested. The heads of the nursery plants appear to be filling well, notwithstanding the continued drought. Mr. J. E. Mundell, Superintendent of the D. L. A. Field Station at Tucumcari, N. Mex., visited the station on the morning of July 12, and in the afternoon lectured before the Farmers' Institute at Amarillo.

On returning from a trip into Bailey County, Mr. Ross reports crop conditions to be better in that section than at Amarillo, due to more recent and heavier rainfalls. Grass in that county was green and in condition to afford excellent pasturage, while at Amarillo it is quite brown.

COLORADO:

Akron Field Station. July 12. Weather continues hot and dry, with a maximum temperature of 101 degrees. Frequent high winds intensify the unfavorable conditions. Grain is ripening very rapidly. Some is well filled, but the average yield will probably be below 50 per cent. A few plats will be practically complete failures. Nursery rows of barley and winter wheat will ripen in a few days. Winter wheat plats, with the exception of very late plantings and a plat each of Crimean and Ghirka, are all harvested. California Feed barley is nearly all in shock, with the remaining barleys and Sixty-Day oats to follow the first of the week.

WYOMING:

Cheyenne Experiment Farm (Archer). July 13. Weather continues hot and dry. Maximum temperature for the past week, 96.5 degrees; minimum, 42. Precipitation, .26 of an inch. Common spring wheats are in the heading stage; durum spring wheats are fully headed. Kherson, Sixty-Day, and Perm oats are fully headed, at a height of from 12 to 14 inches. Flax is in bloom; also peas and potatoes. Winter wheat is showing the effects of drought more than the spring-sown crops; however, rain is needed by all crops. Fifteen directors of the Chamber of Commerce of the United States, accompanied by several commercial men of Cheyenne, were visitors at the station on July 7, making the trip in autos. A picnic will be held at the station on July 19.

Crops in southeastern Wyoming grown under dry-farming conditions are beginning to wither. Winter wheat in some sections is so badly injured that even immediate rain would not revive it. On a 40-mile trip from the station some farmers were seen cutting their winter wheat for hay. In several fields the wheat had headed and completely dried up at a height of only 6 to 10 inches. In only two fields had good clean seed been sown, the others being badly mixed. A few good fields of winter rye and wheat were seen. Spring wheat, oats and barley are very short and burning badly. Corn is looking fairly well.

SOUTH DAKOTA:

Bellefourche Experiment Farm (Newell). July 12. Maximum temperature for the week, 101 degrees; minimum, 54. Only a trace of precipitation has occurred. Nearly all plats of winter wheat have been harvested, and it is expected that the yields will be about 30 bushels per acre. Early oats are ripening rapidly and will probably be cut about the 15th.

Highmore Substation. July 12. A precipitation of .3 of an inch the past week has helped the cultivated crops, such as corn and grain sorghum. Kaoliang C. I. 328 is beginning to head. All cultivated crops are looking well and have suffered but little from the prolonged drought. Small grains are ripening rapidly. Some plats of early-maturing oats and barleys have been harvested. It is expected that the yields of station crops will be slightly higher than last season. The burning of the plats of small grains on land previously planted to corn, and which received commercial fertilizers, was apparently due to excessive growth. The deep-tilled plats were so severely injured

that they had to be cut for hay, but the plats receiving a 7- or 8-inch plowing will yield a small amount of grain. Another interesting fact is that injury from lack of moisture is even more severe on land summer-fallowed last year than on that which then grew corn.

A trip into the southern part of Hyde County the past week resulted in the securing of some excellent photographs for the coming exposition at Tulsa, Okla. On a 15-mile strip of land beginning to the south of the station, on which a 3-inch rainfall was received early in July, late-planted crops on ground which grew corn last year have excellent prospects. Earlier plantings, however, are too greatly injured by drought to revive and will probably yield not more than 5 or 6 bushels to the acre. The farmers are cutting the poorer fields for hay, believing this to be the most profitable procedure in view of the fact that the prairie will furnish but a light hay crop. Thrashing of the early-maturing crops, such as rye, early oats and barley, will be begun next week.

NORTH DAKOTA:

Dickinson Substation. July 12. Weather the past week has been quite changeable, varying from a maximum temperature of 96 degrees to a minimum of 42. Total precipitation, .42 of an inch. This has been of great benefit to grains, which are nearly in full head. Winter rye will be cut early next week. Gatami barley is nearly ripe. Crosses of both winter and spring wheats were made this week.

Williston Substation. July 12. Weather the past week has been cool and rainy. Maximum temperature, 90 degrees; minimum, 42. Total precipitation, .89 of an inch. Precipitation for the months of April, May, and June, 1913, has been below normal. Practically all small grains are fully headed. Flax is past the blossom stage. Grains on summer-fallowed or cultivated ground, and late-sown grains on land which was cropped last year, will yield well. Most of the early-sown grains are rather short, and will probably yield about 50 per cent of normal. Owing to the recent rain the ripening of station crops will be slightly later than was stated last week. It is expected that the bulk of harvesting will occur during the last week of July and the first week of August.

On July 7, Dean J. H. Shepperd and Professors R. C. Doneghue and O. W. Dynes, of the North Dakota Station, and the Superintendents of the North Dakota Substations, visited the station. Mr. E. G. Schollander, Supt. of this station, joined the party, and ex-

pects to be gone a week or more with them in a tour over the State.

MONTANA:

Judith Basin Substation (Moccasin). July 7. Weather the early part of the week was cool and stormy, with a precipitation of .94 of an inch. The latter part of the week, however, has been clear and much warmer. All crops are growing rapidly. Most of the winter wheat is fully 4 feet high, and the heads are filling rapidly. Fretes is the first of the spring wheats to head. All of the barley varieties are headed, the culms being from 2½ to 3 feet high. Sixty-Day and Kherson oats are fully headed, and some of the later varieties are beginning to head. The stand of flax is not uniform, due to uneven germination. All flax varieties are about to bloom, Minn. No. 25 and N. Dak. No. 1329 being the earliest. Preparations are under way for the Fifth Annual Farmers' Picnic, to be held at the station on July 18.

OREGON:

Eastern Oregon Dry-Farming Substation. June 29. Cool weather obtains, the thermometer registering over 70 degrees only one day during the past week. Cool west winds have prevailed throughout the week. A precipitation of .13 of an inch occurred on June 23 and .05 of an inch on June 29, making a total for the month of June of 1.25 inches. It is believed that the best crop of spring grains ever grown on the station will be had this year. Nearly all grains are fully headed, most of them being taller than last year, and thicker in stand. This is especially true of spring barleys. Field peas also promise to yield higher than last year. A few acres of rye have been cut for hay, and weeds have been hoed from the experimental plats.

July 5. Weather continues to be quite cool for this season of the year. For the first 4 days of the week 68 degrees was the highest temperature recorded. On the 5th, however, the maximum temperature was 85 degrees, with a hot east wind prevailing. Total precipitation for the week, .23 of an inch. An extended hot period following the exceptionally cool weather recently prevailing will undoubtedly injure the grains. Winter wheat and several spring barleys are beginnign to ripen, but most of the small grains are at a stage in their growth when such warm weather as was experienced on July 5 would do much damage. The late-maturing field peas would also suffer, as many of them have already begun to show lack of sufficient moisture.

CALIFORNIA:

Biggs Cereal Field Station. July 12. Hot weather accompanied by strong north winds has prevailed during the week. Temperatures ranging from 105 to 110 degrees (maximum, July 11) were recorded on six days of the week, the minimum, 63, being recorded on July 8. No precipitation occurred. Rice is growing rapidly and is looking well. All of the Canary grass has been pulled from the plats.

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NEWSLETTER

OF THE

OFFICE OF CEREAL INVESTIGATIONS,

BUREAU OF PLANT INDUSTRY,

U. S. DEPARTMENT OF AGRICULTURE.

Volume V.

JUL 25

1913

July 25, 1913.

OFFICE NOTES

Mr. Ball left on July 24 to inspect the field stations in the Northwest. His itinerary includes points in Minnesota, S. Dakota, Idaho, Washington, Oregon, California, Nevada, Utah, Nebraska, Wyoming, Montana, N. Dakota, and Illinois.

On July 1 Mr. Chas. H. Clark was appointed Assistant Agronomist in Charge of Flax Investigations, and is now on an inspection trip in the interests of such investigations. His itinerary includes Wyoming, S. Dakota, N. Dakota, Montana, Canada, Minnesota, Illinois and New York. He has been succeeded at Akron, Colo., by Mr. Geo. A. McMurdo, a graduate of the Agricultural College of that State.

On July 1 Mr. P. V. Cardon was appointed as Assistant Agronomist in Charge of Grain Cultivation Experiments, in the far West, and is now traveling in the interests of that work, his itinerary including Utah, Idaho, Oregon, Washington, California and Nevada. He has been succeeded in the Superintendency at Nephi, Utah, by Mr. Arthur D. Ellison, formerly assistant at that station.

On July 1 Mr. John H. Parker was appointed Scientific Assistant in Plant Breeding, and will be stationed at University Farm, St. Paul, Minn., during the summer.

FIELD NOTES

VIRGINIA:

Arlington Experimental Farm. July 23. Weather continues warm and dry. Maximum temperature for the past week, 92 degrees; minimum 57. Precipitation, .22 of an inch. Thrashing of winter wheat varieties is in progress and indications are that the average yield per acre will scarcely exceed 20 bushels. A party of 68 Russian agriculturists and educators were visitors at the farm on the 18th.

TEXAS:

Amarillo Cereal Field Station. July 19. Maximum temperature for the past week, 102 degrees. Hot winds have prevailed daily and no precipitation has occurred. All the oats, the common winter wheats, and the majority of the spring durums, in the field plats, have been harvested during the past week. Thrashing will probably begin July 21. In the nursery the plats have been harvested as fast as they have ripened.

Professor Scribner visited the station the forenoon of the 17th and took a number of pictures. Mr. Rothgeb left the station early this week to travel through western Oklahoma in the interests of broomcorn and grain sorghum work.

KANSAS:

Hays Branch Experiment Station. July 9. Weather continues dry, with prevailing hot winds. The grass-hoppers and chinch bugs are doing great damage to all crops. The sorghums are so badly infested with chinch bugs that in all probability the large fields of kafir and milo will be failures. Harvesting of both the winter and spring grains is completed and thrashing will be commenced the last of the week. Of the spring grains the barley varieties were so short that it was necessary to cut them with the mower.

Corn, kafir and milo on the plats of the Office of Dry Land Agriculture are almost completely destroyed by the grass-hoppers and chinch bugs, and the forage crops area is being considerably damaged.

July 15. The dry weather still continues, the wind reaching a velocity of over 30 miles an hour on the 13th. Maximum temperature, 111 degrees (July 14). Grass-hoppers and chinch bugs have completely destroyed the varietal tests of corn on the upland. Wheat plats in the tillage experiments have been thrashed, yielding from ½ bushel, on the listed plat, to 24 bushels per acre, on the plat which was stubbled-in. The 15/100-acre plats of pure strains on Field 8-1 have also been thrashed, yielding from 10 to 20 bushels. Winter peas were flailed and an approximate yield of 10 bushels per acre was obtained.

The best fallowed D. L. A. plat of wheat yielded only 15½ bushels.

Professor Scribner visited the station on the 15th and took a number of photographs for the exposition of the International Dry-Farming Congress.

July 19. Weather still continues dry, with hot winds. On the morning of the 19th a precipitation of .3 of an inch occurred, which somewhat lowered the temperature. Thrashing is still in progress. The best wheat on fallowed land at the station is yielding about 20 bushels per acre, while the farmers in this section are getting from 8 to 10 bushels, and probably the average for the county will be from 4 to 6 bushels per acre.

IOWA:

Experiment Station (Ames). July 15. Mr. Warburton reports harvesting of barley and winter wheat in both nursery and field plats completed, while about two-thirds of the oats have been harvested. Extremely hot weather is hastening the ripening of all the later varieties. A good rain on July 11 was of much benefit to the corn crop, which is growing rapidly and looks very promising.

July 22. All small grain is harvested, except the late oats in the nursery and classification tests and one plat of spring wheat. Thrashing of the winter wheat nursery is about half completed, and it is planned to begin thrashing the twentieth-acre plats of pure lines and varieties of winter wheat tomorrow.

COLORADO:

Akron Field Station. July 19. Maximum temperature, to date, 103 degrees (July 14); minimum for the week, 55. A precipitation of 1.08 inches on the 18th somewhat relieved the drought. Some of the barley and oats will be benefited. Corn, sorghum and other late crops will probably make good yields. The hot weather is causing the grain to ripen rapidly, some being plump and fairly well filled. All but one plat of winter wheat, and several plats of oats and barley, are cut, and the harvesting of field plats of spring wheat will begin in a few days. The harvesting of the winter nursery is in progress.

Professor Scribner visited the station on July 13.

WYOMING:

Cheyenne Experiment Farm (Archer). July 19. Weather during the past week has been much cooler; maximum temperature,

94 degrees (July 19); minimum, 49 (July 14). Total precipitation, .47 of an inch. This came in four showers, the largest being .21 of an inch.

In spite of the rainfall, crops are still in need of moisture. Winter wheat, which is turning rapidly, is now in the soft-dough stage and needs moisture to fill properly. The cultivated crops are in much better condition than the small cereals. Flax is in bloom and is not showing any effects of the drought as yet. A few of the proso millets are beginning to head and the barley is ripening rapidly.

The majority of the potato varieties are in bloom. Alfalfa and sweet clover in rows are looking quite well.

Farmers east of Archer report that during the past week they have had two good rains, which will be of enormous value to the late varieties of cereals.

The picnic held at the Station July 19 was quite a success, about 125 people attending. Speeches were made by J. M. Carey, Governorof Wyoming, President Duniway of the University of Wyoming, and Mr. J. R. Carpenter. The farmers manifested considerable interest in the work, and many were surprised to see the crops on sod-land looking so well.

SOUTH DAKOTA:

Bellefourche Experiment Farm (Newell). July 19. Weather during the past week has been favorable for maturing grain; a rain, however, would be of benefit to all grains not yet ripe. Harvesting has been in progress since the 10th, nearly all plats of winter wheat, barley, and early oats being cut. Nursery rows are now being harvested. Good yields are expected from winter and spring wheat; oats are fair, and barley poor. Oats and barley were grown on ground cropped last season, while the wheats were grown on summer-fallowed land. The nursery is very promising and good results are expected.

Highmore Substation. July 19. Precipitation during the past week, which amounted to 1.4 inches, was very beneficial to the grain sorghums, corn, flax and millet. All cultivated crops were beginning to suffer from lack of moisture. Nearly all small grains are harvested with the exception of the late oats, and the remaining plats will be ready to harvest early the coming week. Nursery plats are ripening rapidly and, with the exception of those of millet, flax, and grain sorghum, will be harvested within the next two weeks. Winter rye was thrashed

during the past week, the yields being as follows:

Rate of seeding		Grain (Bu.)	Straw (Lbs)
2 pks.		15	2660
3 "	(Manured)	13.1	1990
3 "	(No manure)	11.7	1917.5
4 "		13.5	2245
5 "		15.7	2270
6 "		13.6	2690

Experiment Station. (Brookings). July 16. Mr. Champlin reports crops in the central Sioux Valley in excellent condition. The stooling of all varieties of grain is comparatively light this year, but recent abundant showers have enabled the grains to fill well, and prospects of a fair crop are very good. Good results will be obtained at the Eureka Substation this year; at Highmore they will be better than last year; while at Cottonwood, considerably worse, as the drought there has continued practically unbroken since early in June.

NORTH DAKOTA:

Dickinson Substation. July 19. Weather the past week has been cool, with several light rains. Conditions have been ideal for the heading grain, and crops on the whole look well in spite of the slight rainfall.

Mr. J. A. Clark attended an Institute Meeting at Washburn, N. Dak., during the early part of the week, and gave a talk on cereals. On July 17 the station was visited by Messrs. O. A. Thompson, E. G. Schollander, and E. D. Stewart, superintendents of the Edgeley, Williston, and Langdon substations, respectively, and Professors R. C. Doneghue and O. W. Dynes, of the N. Dakota Agricultural Experiment Station.

Williston Substation. July 19. Weather the past week has been excellent for the growing grains. Maximum temperature, 84 degrees; minimum 48. Total precipitation, .48 of an inch. Winter wheat is ripening, and, together with spring rye, will be ready for harvest during the coming week. The heights of grains in the field plats on summer-fallowed ground are as follows: Oats, 36-42 in.; Barley, 30-36 in.; Common Wheats, 36-44 in.; Manchuria, C.I. No.2492, 36 in.; Marquis, 36 in.; Minn. No.163, 42 in.; Durum Wheats, 40-44 in. Shet Gahu, C.I. No.2399 (durum) is only about 18 inches high, and will be too short for convenient cutting.

As yet nothing has been harvested in this locality except winter rye.

Superintendent E. G. Schollander returned today from a tour of the State, and reports that crops look better here than in other parts of the State.

MONTANA:

Judith Basin Substation (Moccasin). July 19. Weather has been cool, and in spite of lack of precipitation none of the crops has suffered. All crops are making excellent growth and good yields are expected. A slight frost occurred on July 13, which damaged the corn and potatoes to a slight extent but did not hurt the grain.

The fifth Annual Farmers' Picnic was held at the station on July 18, about 3000 people attending.

IDAHO:

Aberdeen Substation. July 18. Minimum temperature of 33 degrees on July 14 slightly damaged potatoes, corn and other tender crops. The dry-farm barley nursery is now being harvested. All the early varieties of barley made excellent growth and produced very well.

Considerable trouble is being experienced with potato diseases in the Idaho Falls District, but so far the crop in Aberdeen has not been attacked.

The new dry-farm weeding and summertilling machine recently constructed at the station was a complete success. The machine cuts a ten-foot swath, is mounted on wheels and operates with a levers. Each knife is separate and runs with a pressure very similar to the disks on a disk drill.

President W. L. Carlyle and Professor W. H. Olin of the State University, Mr. R. A. Oakley of the Office of Forage Crop Investigations, and Mr. E. H. Grubb, the potato specialist for the Harriman System, visited the station recently.

Farmers' Day was held at the station on July 12, over 100 farmers attending.

UTAH:

Nephi Substation. July 18. Maximum temperature for the week, 95 degrees; minimum, 52. The first part of the week was extremely hot and dry, with prevailing winds at the rate of 4 miles per hour; while the latter part has been partly cloudy, thus checking to some extent the rapid ripening of crops. Early varieties of spring oats are in good condition and ripening rapidly. Utah winter barley is filling well, but the stand is comparatively light. The inter-tilled crops are making a good showing under such dry conditions. Harvesting of winter wheat will begin on July 21.

Mr. S. R. Boswell, of Nephi, was appointed an assistant by the state officials, and commenced work at the station, July 14.

Mr. Cardon reports crops in northwestern Utah in good shape, and that harvesting in some sections will begin at an early date. In the vicinity of the Cedar Valley Experiment Station crops were in poor condition.

CALIFORNIA:

Plant Introduction Garden (Chico). July 15. Although precipitation for the season has been below normal, good yields have been obtained from all grains. Thrashing is completed. The five highest yielding varieties of wheat, oats and barley are as follows:

Variety	C. I. No.	Yield in bushels
Sel. from Blenoir	2511-2	54.10
Sel. " Chul	2227-1	53.25
Sel. " Koola	2203-4	49.00
Sel. " Chul	2227-2	47.75
Washington Bluestem	2985	46.75
	BARLEY	
	518	66.75
Abyssinia	361	64.50
White Smyrna	195	58.00
	193	57.50
Hannchen	531	57.00
	OATS	
Sixty-day	165	44.00
Com. Calif. Red		41.80
Dewey	180	37.40
	650	35.50

Biggs Cereal Field Station. July 15. Weather has been very favorable for the growth of rice. The canary grass which has caused so much trouble in the rice plats has been eradicated.

OREGON:

Eastern Oregon Dry-Farming Substation (Moro). July 15. Harvesting has been begun, winter rye having been cut. The cutting of some of the spring barley varieties is now in progress. Wheat will probably not be ready for harvesting for at least two weeks.

July 20. In contrast to the unusually cool weather during the month of June and the first two weeks of July, the weather during the past week has been hot, a maximum of 94 degrees being reached on the 19th. There has been no precipitation, and hot east winds have prevailed. The heat has had a marked effect on the crops. Winter wheat, spring oats and barley were sufficiently advanced not to be injured, but the spring wheat varieties have burned badly, and their yield greatly reduced. Some of the later maturing varieties with thick stands, which a week ago gave promise of good yields, may be total failures if the hot weather continues. During the week nearly all the spring barley varieties have been harvested. Sixty-day and Kherson oats, and several of the field pea varieties are in the shock. The first oat to mature was a selection from Sixty-day made at this station. Of the spring barleys, Beardless, Gatami, Mariout, and Beldi, were the first to mature. The oats and spring barleys are considerably taller than they were last year, and it is also expected that the yields of most of the varieties will be higher. Of the spring wheats Sonora and Marquis will probably be the first to ripen.

Director James Withycombe of the Oregon Experiment Station inspected the farm the past week.

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NEWSLETTER

OF THE

OFFICE OF CEREAL INVESTIGATIONS,

BUREAU OF PLANT INDUSTRY,

U. S. DEPARTMENT OF AGRICULTURE.

Volume V.

1913

August 1, 1913.

NOTICE TO FIELD MEN.

The Chief of the Bureau has requested complete data relative to the field work of the Bureau; among the questions asked are the following:

LAND:

(5) How much land is in use at this Station...............
How much, if any, of this land is irrigated...........

EQUIPMENT:

(7) What permanent equipment, such as buildings, greehouses, fences, etc., and nonexpendible equipment, such as livestock, vehicles, farm machinery, etc., is there at this station? Give a list of that owned by the Department and by the cooperating agency, with the physical valuation and condition.

Department

Equipment	Physical valuation	Condition
House (No. Rooms)............	$.........	....

Each of the field men of this Office will please send this information immediately upon the receipt of this Newsletter.

OFFICE NOTES.

Dr. Leighty returned to the Office on July 26, from a trip through West Virginia, Kentucky, Missouri, Iowa, Illinois, Indiana, Ohio, Pennsylvania and New York. He reports winter wheat in exceedingly good condition in practically all localities visited, the poorest wheat seen being in the vicinity of Washington, D. C.

Mr. Derr returned to the Office on July 29, from a trip through New Jersey, New York, Pennsylvania, Delaware and Maryland. This trip was made for the purpose of inspecting rye fields, investigating the methods of harvesting and thrashing the crop and of baling the straw. The wholesale markets where rye products are handled were visited.

FIELD NOTES.

VIRGINIA:

Arlington Experimental Farm. July 30. Weather the past week has been very warm; maximum temperature, 100 degrees (July 29); minimum, 54 (July 26). An unusual and terrific wind, rain and hail storm occurred today, lasting about thirty minutes and seriously damaging all field crops. What little grain still remained in the field was badly scattered by the wind, which, according to Weather Bureau reports, attained a velocity of 66 miles an hour. The precipitation was 2.02 inches. The storm was local in character, and reports thus far received do not indicate any great loss of crops outside the vicinity of Washington. In the city itself there was much damage to property, and windows and roofs of several Government buildings were injured.

LOUISIANA:

Crowley Rice Experiment Station. July 19. Weather the past week has been very warm, with a maximum temperature of 96 degrees. Rain is greatly needed. Early planted Honduras rice is heading. Italian rices are booting and will soon start to head. All rice plantings from the California seed contain considerable grass and weeds.

TEXAS:

Amarillo Cereal Field Station. July 26. Maximum temperature for the week, 96 degrees; minimum, 56. During the week a precipitation of .91 of an inch occurred. This has somewhat benefited the crops on the north end of the farm, but at the south end the rain was not heavy enough to be of much value. The growth of the sorghums has been slow, and they are now badly burned. In some of the early kaoliangs a few small heads are entirely exserted from the boot. The milos have made the least growth and are in worst condition, due probably to the thick stand. All field plats of small grains have been harvested. A portion of the oat plats has been thrashed, yielding from 5 to 16 bushels per acre. Harvesting of the nursery is practically completed.

A yield of 19 bushels per acre has been obtained from one of the oat plats of the Office of Dry Land Agriculture.

Mr. R. A. Oakley, of the Office of Forage Crop Investigations, visited the station on July 25. Mr. Rothgeb returned to the station on the 23d from a trip through Western Oklahoma in the interests of the broomcorn and grain-sorghum work. He reports these crops in better condition than corn, although damaged by drought and hot winds. Mr. Ross left the farm on July 26 for College Station, Texas, where he will attend the State Farmers' Institute. He will make several stops enroute, to study crop conditions throughout the state.

KANSAS:

Hays Branch Experiment Station. July 26. Two light showers have occurred, one of .4 of an inch on the 19th and one of .1 of an inch on the 22d. Thrashing was completed on July 24. Most of the grain from the plats has been sorted and cleaned. Grasshoppers and drought have completely destroyed the duplicate varietal tests of corn on both upland and bottom land.

COLORADO:

Akron Field Station. July 26. Weather continues cooler; maximum temperature for the week, 87 degrees; minimum, 53. Numerous light showers have interfered with harvesting, but so far no loss has occurred through shattering of the grain. All field plats of grain, except oats, are harvested. The grain-sorghums are heading.

Mr. R. A. Oakley, of the Office of Forage Crop Investigations, visited the station July 22 to inspect the work being done by that Office. Mr. L. J. Briggs, of the Biophysical Laboratory, visited that station on the 23d.

WYOMING:

Cheyenne Experiment Farm (Archer). July 26. Weather has been much cooler during the past week; maximum temperature, 82 degrees; minimum, 49.5. Total precipitation, 1.33 inches. The rain has materially improved the condition of all crops, although the later-maturing grains will be more benefited than will winter wheat and the early varieties of oats and barley.

Corn and flax are growing quite rapidly. The broomcorn millets are heading.

Mr. O. J. Grace, Superintendent of the Akron Field Station, and Mr. C. H. Clark, now in charge of flax investigations in the Office of Cereal Investigations, visited the station on July 22. Mr. Warburton, Office of Cereal Investigations, and Messrs. C. B. Smith, of the Office of Farm Management, and A. E. Bowman, of the Wyoming Experiment Station, were at the station on the 25th.

SOUTH DAKOTA:

Highmore Substation. July 26. Although no precipitation of value has occurred during the past week, most crops are making excellent growth. Millets and grain-sorghums are doing very well. Kaoliangs, C.I.Nos. 261-4 and 171-8, are beginning to head, and from present indications this year's crop will equal those of the past three seasons. The yields from the nursery plats will exceed those of last year.

NORTH DAKOTA:

Dickinson Substation. July 26. Maximum temperature for the week, 90 degrees; minimum, 46. Only a trace of precipitation has occurred. Crops are beginning to show the effect of the drought, but the grains are too far advanced to be badly damaged. Winter rye and the early varieties of barley have been cut.

Williston Substation. July 26. Maximum temperature for the week, 92 degrees; minimum, 42. There has been no precipitation. Grains are ripening rapidly, and the winter wheat and some of the oats and barley will be ready for harvesting next week.

A Farmers' Picnic will be held at the station July 31.

MONTANA:

Judith Basin Substation (Moccasin). July 26. Weather continues warm and dry. Maximum temperature for the week, 86 degrees; minimum, 46. All the grains are in good condition, and are not as yet suffering from the dry weather. Spring wheat is fully headed, and from 3½ to 4½ feet tall. Winter wheat is ripening rapidly, Sixty-day oats are beginning to turn, and some of the early barley varieties are beginning to ripen. Some of the barley varieties made such rank growth during the wet weather in June that they are beginning to lodge.

Messrs. J. S. Cole, W. W. Burr and E. C. Chilcott, of the Office of Dry-land Agriculture, visited the station during the week. Professor F. Lamson-Scribner was at the station on July 23 and 24, to take pictures and make arrangements for the exhibit at the exposition of the International Dry-Farming Congress.

IDAHO:

Aberdeen Substation. July 26. Precipitation for July has been 1.47 inches, practically all of which has occurred during the past three days. The rain was accompanied by heavy winds and caused much damage to the oats and barleys, practically all of the heavy yielding varieties being badly lodged. Most of the grain having reached the hard-dough stage the yield will not be seriously affected. Harvesting began on July 14.

Harvesting of Turkey wheat has begun in the dry-farming territory in the vicinity of the station.

Mr. Cardon spent two days at the station this week.

UTAH:

Nephi Substation. July 25. Weather continues dry and hot. All grain plats, except those of durum wheat and Black Winter emmer, are more than fifty per cent ripe. Some of the early plantings of winter wheat and Sixty-day oats are harvested. Burrowing animals have done considerable damage to some plats, and so far the attempts made to destroy these pests have been unsuccessful.

Field peas, corn and potatoes, in rotation, are looking well and making good growth.

On July 22 a trip was made through Dog, Furner and Tintic Valleys. Fall rye, which is the principal crop there, is giving very good results. Turkey and Koffoid wheat are also being grown in these valleys, but to a less extent than rye. Field peas and spring oats planted last spring, and now being cut for hay, are proving a very satisfactory dry-farm crop. The Russian thistle is doing considerable damage.

OREGON:

Eastern Oregon Dry-Farming Substation. July 27. Hot weather accompanied by hot east winds continued until July 24, a maximum temperature of 100½ degrees and a minimum of 76, being reached on the 20th. The past three days have been cooler with brisk westerly winds. No precipitation has occurred since July 2. The hot, dry weather will reduce the quality as well as the yield of the spring wheat varieties. All oat and barley varieties, and the winter wheat on some of the tillage experiment plats, have been harvested. The greater part of the grain nursery has been cut. Thrashing will begin July 28.

Field peas and corn have suffered from the drought. Corn planted for increase seed is so badly burned that it may not survive. Field pea varieties have been harvested.

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NEWSLETTER

OF THE

OFFICE OF CEREAL INVESTIGATIONS,

BUREAU OF PLANT INDUSTRY,

U. S. DEPARTMENT OF AGRICULTURE.

Volume V.

AUG 8

1913

August 8, 1913.

MEMORANDA.

DEPARTMENTAL PUBLICATIONS
New Plan of Issue

Assistant Secretary's Memorandum No. 34, dated July 1, 1913, outlines a new system of issuing Departmental publications, after July 1, 1913.

A "Journal of Research" will be established, and will contain reports of investigations which are new and directly or indirectly useful to the art of Agriculture. These articles must be concise; in general not over ten or twelve pages in length and in no case over fifty. Articles of greater length should be prepared for publication as supplementary monographs, which should be, as nearly as practicable, thorough and complete treatises upon the subject dealt with.

The Journal and the monographic supplements should be royal octavo in size in order to give greater freedom in the use of diagrams and technical illustrations. Separates of different articles will be available for distribution at the time of issue of the number of the Journal containing the articles in question. Greater freedom of distribution will be accorded to these than to the Journal, practically the same regulations governing their distribution as now affect that of technical bulletins.

The Journal shall be distributed free to agricultural colleges, technical schools and experiment stations, to libraries of large universities, to Government depositories, and to such institutions as make suitable exchanges with this Department. It is expected to publish the Journal on an average of twice a month.

An Editorial Committee consisting of Dr. Karl F. Kellerman, Chairman, Dr. C. L. Marlatt and Dr. E. W. Allen, will have charge of selecting articles for publication in the Journal and all matters pertaining to its management. Special mailing lists will be furnished by the Bureaus and kept on file with mailing lists of institutions and special individuals interested only in certain technical lines, to whom will be distributed appropriate reprints from the Journal.

For the present the contributors will be confined to members of the official scientific staff of the Department of Agriculture, but later it is proposed to include the scientific workers of the State Agricultural Experiment Stations, in which case the Editorial Committee will be increased to five members, two of whom will be from the experiment stations.

The Bureau series of bulletins and circulars will be discontinued. The scientific and technical material heretofore published this series will appear in the Journal, while the popular matter will be published in a Departmental series of bulletins.

The Farmers' Bulletin series will be continued. These should be practical, concise, specific and instructive statements on matters relating to country life, and should seldom exceed 16 pages in length. They should not be too general in character and should be put in such literary form that they will be read.

Papers for publication in the Yearbook should be of a magazine character rather than technical discussions or reports of progress. The restriction upon the length of the Yearbook papers will be removed and preference will be given to interesting descriptions of important crops or industries.

The Crop Reporter, heretofore issued by the Bureau of Statistics, will be discontinued.

UNDERTAKING TO SUPPLY TWO WEEKLY SYNDICATE ARTICLES

The Office of Information has completed arrangements for supplying weekly articles to two syndicates which supply press matter in plate form to rural newspapers. One association will supply this material to one thousand rural newspapers; while the other, which numbers about eight thousand rural papers among its customers, will offer the material in plate form to such newspapers as care to buy it. By this method the Department will gain a large circulation for its educational material at no greater cost than preparing one copy of each article.

The material should be in the form of practical, valuable paragraphs or articles not over 400 words in length. Shorter items and particularly interesting notes of two or three printed lines will be very useful. One or two photographs directly connected with the text can be used to advantage. All matter must be approved by the Chief of Bureau, and be marked "For Weekly Syndicate Article".

In suggesting matter for these articles, Bureau writers must bear in mind that one of these articles will not reach the papers in plate form for two full weeks, and that material for the other article must be written one month in advance of publication.

The first articles will be prepared about the middle of August. Items for subsequent weekly articles should be filed each Friday before 2 P. M.

ESTABLISHMENT OF WEEKLY NEWS LETTER TO CROP CORRESPONDENTS

Beginning the first week in August, a weekly News Letter to Crop Correspondents will be issued, as a partial substitute for the monthly Crop Reporter, notice of discontinuance of which was given in Memorandum No. 34. The aim is to make the body of the News Letter, which goes to correspondents throughout the United States, an interesting and effective summary of the most important, practical discoveries and recommendations of all Bureaus and Offices each week.

The Office of Information will have charge of issuing the News Letter. The Chief of Bureau will designate one member of his staff to gather and prepare material.

Each Bureau and Independent Office should submit one or more items for publication each week in the News Letter. If more than one item is submitted, the order of importance for immediate circulation of the several items must be indicated. Each item must be "approved for weekly news letter" by the Chief of the Bureau issuing it.

Items for the body of the letter must give information capable of direct and profitable application by the individual producers in the entire country or in a large part of it. These items should not exceed 300 words in length, and should be simple, exact statements free from technical terms. No drawings or diagrams can be used.

Items for the localized supplement may deal with matters pertaining to specific products or affecting limited localities. Exceptions as to length will be allowed when the localized matter is of major importance and cannot safely be condensed to 300 words. Press material of special local applicability may, upon request, be placed in the supplement for a specified territory. The Bureaus should find this supplement especially useful in circulating quickly to producers and the local press, notices of quarantines, methods of overcoming pests, diseases, etc.

Early preparation of copy is very important. All items to secure publication in the succeeding week's issue should be filed with the Office of Information, plainly marked "For the Newsletter of ....." not later than 2 P.M. each Friday.

PUBLICATION OF MANUSCRIPTS IN SCIENTIFIC AND TECHNICAL JOURNALS

Referring to Departmental Memorandum No. 16, which appeared in Newsletter of June 17, 1913, regarding the publication of articles by Department men in outside scientific and technical journals, it is desired that a copy of each of these articles be held on file in the Office of the Secretary. In

submitting such manuscripts for the approval of the Secretary, therefore, a copy should be included which can be retained in that Office.

AUTOMOBILE AND MOTORCYCLE LICENSES.

The Comptroller of the Treasury, in an opinion dated July 22, decides, that payment of registration and license fees for automobiles and motorcycles owned by the Department of Agriculture and used by employees of the several Bureaus cannot be authorized from the appropriation for that Department. Accordingly reimbursement will not be made for such expenditures.

NOTICE TO FIELD MEN

Leave of absence asked for during travel must be at a point on direct route. The ordinary leave request blank must be filled out in addition to the new travel request blank.

The Great Plains Cooperative Association will hold its meeting at North Platte, Nebr., August 20, 21 and 22, inclusive. The dates previously announced were August 19, 20 and 21.

OFFICE NOTES

Prof. W. R. Dodson, Director of the Louisiana Agricultural Experiment Station, visited the Office August 5.

FIELD NOTES

VIRGINIA:

Arlington Experimental Farm. Aug. 6. Maximum temperature for the week, 95 degrees; minimum, 61. Total precipitation, 2.03 inches. The rain has greatly improved the condition of all crops. Thrashing of field plats was completed August 2. Varieties and selections of winter oats in the nursery are now being thrashed.

Corn and cowpeas havebeen greatly improved by the abundant precipitation of the past week.

TEXAS:

Beaumont Cooperative Rice Experiment Station. Aug. 2. Weather continues very hot and dry, causing much damage to dry land crops throughout this section. On account of salt water

some of the pumping-plants along the Neches River have shut down and more will be forced to do so if the drought continues.

About 300 members of the Southern Rice Growers' Association visited the station July 16. Mr. Chambliss, and Mr. J.L. Young, of the Department of Agriculture and Forestry with headquarters at Peking, China, were at the station on the 25th.

Amarillo Cereal Field Station. Aug. 2. Maximum temperature for the week, 98 degrees; minimum, 58. Total precipitation, .38 of an inch. Grain-sorghums have been so badly affected by the drought that the light showers of the past week were of no value to the crop. The highest yields from the field plats of small grains thrashed during the week are as follows:

Winter rye	8.39	bu. per acre
Winter barley	10.80	" " "
Spring wheat	10.00	" " "
Oats	16.80	" " "

Harvesting of the nursery grains has been completed, and thrashing is now in progress.

Prof. E. C. Chilcott, of the Office of Dry-land Agriculture, visited the station on August 2.

KANSAS:

Hays Branch Experiment Station. Aug. 2. Weather continues hot and dry, maximum temperature, 105 degrees, being reached on July 31. Precipitation for the week, .04 of an inch. Maximum temperature for the month of July, 111 degrees (July 14). Total precipitation for the month, .63 of an inch. The milos have been so badly damaged by grasshoppers and chinch bugs that they cannot make a crop. The earliest Kaoliangs and Freed's Sorgo No. 350 began heading last week, and will make fair yields. Durra Kafir Hybrid seems slightly more drought-resistant than any other variety, but is not so far advanced as the dwarf Kaoliang, which is nearly ready to head.

The only crops which have been unaffected by the drought are demonstration plats of tepary beans, Mexican beans, and Spanish peanuts.

Fodder from the test of corn on bottom land has been used for ensilage.

Seedbed preparations are completed on the Dry-Land Agriculture plats. Kafir and milo have been cultivated under or cut down with the hoe.

On the Forage Crop Investigations plats the Sudan Grass and millets have been harvested, and soil preparation for next year's work has been begun.

Farms in the vicinity of the station have been badly damaged by the drought, grasshoppers and chinch bugs.

COLORADO:

Akron Field Station. Aug. 1. Maximum temperature for the week, 96 degrees; minimum, 43. Precipitation, .01 of an inch. Harvesting of nursery grains is in progress, all winter grains, except emmer, being cut. A plat of White Tartarian oats is the only field plat of grain not yet harvested. Grain-sorghum and buckwheat are looking well. Millets have made rapid growth and have nearly finished heading.

Prof. E. C. Chilcott, of the Office of Dry-land Agriculture, and Prof. J. D. Tinsley, of the A. T. & S. F. Ry. Co., visited the station during the week.

WYOMING:

Cheyenne Experiment Farm (Archer). Aug. 1. Maximum temperature for the week, 84.5 degrees; minimum, 44. Harvesting was begun July 28, and most of the barley, early oat, and winter wheat varieties have been cut. The yields of these crops will undoubtedly be low because of the drought. Spring wheats, especially the durum varieties, look promising.

Corn is growing nicely.

SOUTH DAKOTA:

Highmore Substation. Aug. 2. Excessively hot weather prevails, with only a trace of precipitation. Cultivated crops do not show the effects of the continued dry weather as yet.

Mr. C. H. Clark, in charge of flax investigations in the Office of Cereal Investigations, spent July 31 at the station inspecting that crop. Prof. W. A. Wheeler and Mr. W. S. Hill, of the Dakota Improved Seed Company, of Mitchell, S. Dak., visited the station July 30.

NORTH DAKOTA:

Dickinson Substation. Aug. 2. Weather continues hot and dry. Maximum temperature for the week, 93 degrees; minimum, 45. Precipitation, .09 of an inch. Grain is ripening rapidly. More than half of the oat, barley and winter wheat varieties have been harvested.

Mr. C. R. Ball visited the station this week.

Williston Substation. Aug. 2. Weather continues hot and dry. Maximum temperature, 95 degrees. Harvesting began August 1, and all field plats of barley, and winter wheat, and two oats in the varietal test, have been cut. Ghirka is ripening ahead of other wheats and looks promising. About 60 per cent of the nursery has been harvested. All early oat varieties in the nursery, and Sixty-day in the field plat, have pro-

duced a second growth and are still as green as the late varieties.

Harvesting in the surrounding country is later than in the immediate vicinity of the station, and will not be in full progress for another week.

MONTANA:

Judith Basin Substation (Moccasin). Aug. 2. Weather during the week has been warm; maximum temperature, 91 degrees; minimum, 37. Two light showers occurred (precipitation, .43 of an inch) but were of little benefit. Some Sixty-day oats on the rotation plats have been harvested, and the cutting of winter wheat is in progress. Spring crops are ripening rapidly.

IDAHO:

Aberdeen Substation. July 28. Mr. Warburton visited the station today, and reports crops in fine condition, barley being especially good. The earliest varieties of barley, on the dry land, have been harvested.

UTAH:

Nephi Substation. Aug. 1. Weather has been partly cloudy during the week. Maximum temperature, 89 degrees; minimum, 49. Precipitation of .01 of an inch occurred July 27. Grains have filled remarkably well in spite of unfavorable weather conditions. Over 50 per cent of the grains are harvested. Nursery grains are ripening unevenly due to thinness of stand.

The second cutting of alfalfa was made July 31.

OREGON:

Harney County Dry-farming Substation (Burns). Aug. 1. Mr. Cardon visited the station today and reports crops in good condition. Spring oats and barley are doing very well.

Peas will make an abundant yield. Corn is not doign quite so well, but alfalfa is promising.

Eastern Oregon Dry-farming Substation. Aug. 3. Weather since July 31 has been hot and dry. Maximum temperature, 99 degrees (Aug. 1). Hot east winds have caused excessive evaporation. Total precipitation for July, .06 of an inch. Nearly all grains are harvested and thrashing will begin this week. The late seeding of spring wheat, which is ripening now, will be practically a failure.

Some fields of winter wheat in the vicinity of the station are yielding 35 bushels per acre.

Dr. Humphrey and Mr. Warburton visited the station recently.

SEP 8 - 1913

NEWSLETTER

OF THE

OFFICE OF CEREAL INVESTIGATIONS,

BUREAU OF PLANT INDUSTRY,

U. S. DEPARTMENT OF AGRICULTURE.

Volume V.

AUG 15

1913

Aug. 15, 1913.

FIELD NOTES

VIRGINIA:

Arlington Experiment Farm. Aug. 13. Weather since August 10 has been cold and wet. Maximum temperature for the week, 98 degrees (August 10); minimum, 60 (August 12). Total precipitation, 1.56 inches. Thrashing of winter oats in the nursery was completed August 9; other thrashing has been delayed by the rain.

LOUISIANA:

Crowley Rice Experiment Station. Aug. 9. Maximum temperature for the week, 96.5 degrees; minimum, 71. A precipitation of 2.36 inches occurred on August 8, which was very beneficial to the crops, which are all doing well. Rice is heading rapidly and several of the early varieties are ripening.

Soybeans, corn, and cowpeas are more promising this year than any previous one.

TEXAS:

Beaumont Cooperative Rice Experiment Station. Aug. 9. Weather has been hot and dry. All rice planted on Apr. 15 is heading. About 20 of the nursery rices have headed.

Amarillo Cereal Field Station. Aug. 9. Weather has been hot, with high winds the latter part of the week. Maximum temperature, 100 degrees; minimum, 59. Precipitation, .04 of an inch. Thrashing of the field plats of small grain was completed August 5. The highest yield of winter wheat was 10.8 bushels per acre; the lowest, .33 of a bushel. All row crops have been destroyed by the drought, except those on summerfallowed land or which have a very thin stand, and these are badly in need of rain. Nursery rows are in progress of thrashing.

COLORADO:

Akron Field Station. Aug. 9. Maximum temperature for the week, 98 degrees; minimum, 54. Winter wheat has been thrashed and an average yield of 12 to 15 bushels per acre obtained. One plat of Kharkov wheat yielded nearly 25 bushels to the acre. Thrashing of spring wheat is in progress.

Mr. A. C. Dillman, of the Office of Alkali and Drought-Resistant Plant-Breeding Investigations, arrived at the station during the week.

SOUTH DAKOTA:

Bellefourche Experiment Farm (Newell). Aug. 9. Harvesting of the grain plats was completed August 6, and thrashing began on the 8th. Thrashing of winter wheats has been completed, and yields range from 16 to 45 bushels per acre. The highest yields were made by Beloglina, (C.I. No. 2239), 39.4 bushels per acre, and Hard Winter (C.I. No. 2943), 39.3 bushels. A one-fiftieth-acre plat of the latter yielded at the rate of 45 bushels per acre. The earlier seedings produced the best results in the time-of-seeding test. The earliest seeding (August 6) produced 29.2 bushels per acre, and from this there was a gradual decrease to 16.1 bushels per acre from the latest seeding (November 15). In the rate-of-seeding test a seeding of 7 pecks per acre gave the highest yield, 28.1 bushels per acre; with the 3-peck rate second, 27.9 bushels. All seedings above 2 pecks per acre gave practically the same yields.

Highmore Substation. Aug. 9. Weather has been cooler, with a precipitation of .21 of an inch, which has lessened the damaging effects of the drought. Grain sorghums are doing very well, the heads are filling rapidly.

Mr. J. S. Cole, of the Office of Dry-land Agriculture, visited the station August 5.

NORTH DAKOTA:

Dickinson Substation. Aug. 9. Maximum temperature for the week, 97 degrees; minimum, 51. Precipitation, .39 of an inch. Harvesting of grain is about two-thirds completed, and fairly good yields are expected.

Mr. H. V. Harlan visited the station this week. Mr. J.A. Clark, of the station, made a trip with him through the surrounding farm lands. Crops were in good condition, although not so far advanced as those on the station farm.

Williston Substation. Aug. 9. Weather has been cool, with a precipitation of 0.5 of an inch. Grain has not ripened very rapidly. Of the field plats of grain, all barley varieties, about two-thirds of the oats, and Ghirka wheat have been cut. Harvesting of the nursery is nearly completed.

In the vicinity of Williston, barley and oats have been cut, and the harvesting of wheat will begin next week.

IDAHO:

Aberdeen Substation. Aug. 9. All grain on the dry farm has been harvested and thrashing will begin August 11. On the irrigated land practically all barley varieties, and some of the oats, have been harvested. The first plat in the time-of-seeding test was planted August 4.

Messrs. C. R. Ball and H. V. Harlan visited the station August 1 and 2.

UTAH:

Nephi Substation. August 9. Cloudy weather has prevailed during the week. Maximum temperature, 89 degrees (Aug. 4); minimum, 51 (Aug. 7). Precipitation, .24 of an inch. The harvesting of field plats of winter and spring grains was completed August 8, and preparations are being made for thrashing. Harvesting of the nursery will be completed early the coming week.

Harvesting is in progress on the Levan Ridge.

SEP 8-1913

NEWSLETTER

OF THE

OFFICE OF CEREAL INVESTIGATIONS,

BUREAU OF PLANT INDUSTRY,

U. S. DEPARTMENT OF AGRICULTURE.

Volume V.

AUG 22
1913

August 22, 1913.

NOTICE TO FIELD MEN.

Mr. Harlan requests that if any of the field men should, in the course of their work, learn of either alfalfa or clover dodder, and could procure seed of same, it be sent to him at University Farm, St. Paul, Minn.

OFFICE NOTES

On August 16, Mr. M. A. Carleton returned to the Office to fill his former position of Cerealist. He left on the 19th on a field trip, which will include points in New York, Illinois, North Dakota, Montana, Wyoming, Kansas, Texas and Oklahoma.

FIELD NOTES

VIRGINIA:

Arlington Experiment Farm. Aug. 20. Maximum temperature for the week, 90 degrees (August 17); minimum, 58 (August 13). Thrashing of wheat from nursery rows was completed August 20. The grain obtained from the field plats of varieties and selections of winter oats has been cleaned and tested, with the following results

C.I. No.	Name	Yield per A. (bu.)	Wt. per bu. (lbs.)
206-3	Argentina Selection	49.8	35
256	Red Rustproof	49.4	30
206-7	Argentina Selection	46.6	37
274-20	Snoma Selection	46.6	36
548	Red Rustproof	45.5	32
518-3	" " (Cliff)	43.4	28
511-0	----------	42.7	36
427	Gray Winter	40.0	35.5
431	Winter Turf	40.0	36
206	Argentina	36.6	36
435	Winter Turf	35.9	38
273	Culberson	34.0	35
273-19	Culberson Selection	31.9	36
273	" "	26.9	34

LOUISIANA:

Crowley Rice Experiment Station. Aug. 18. Maximum temperature for the week, 92 degrees; minimum, 71. Total precipitation for the week, 3.87 inches. Rices are heading and maturing rapidly. The heavy rains are interfering greatly with the rice harvest, and are injuring legumes and other non- irrigated crops. During the past 8 days the precipitation has been greater than during the month of June, and very nearly as great as during July. There are numerous reports from the parish south of Crowley of the presence of "Straight Head" in rice, and some of the plats of Honduras rice on the station will be damaged about 95 per cent by this disease.

A Field Day Demonstration will be held at the Station on August 23.

TEXAS:

Amarillo Cereal Field Station. Aug. 16. The weather continues hot and dry; maximum temperature, 102 degrees; minimum, 62. The few showers which have occurred have been too light to be of benefit, the total precipitation being only .07 of an inch. Thrashing of the nursery is in progress.

Cultivated cowpeas is the only crop on the farm which is holding its natural color; it is, however, making no further growth because of the continued drought.

KANSAS:

Hays Branch Experiment Station. Aug. 16. The hot, dry weather continues, and hot winds prevail. Maximum temperature for the week, 107 degrees. A slight precipitation of .05 of an inch occurred on August 12.

COLORADO:

Akron Field Station. Aug. 16. Maximum temperature for the week, 95 degrees. Precipitation of .81 of an inch has occurred. Thrashing of the spring wheat plats is in progress, and Arnautka gives promise of making the highest yield. The nursery was planted late and is still ripening.

WYOMING:

Cheyenne Experiment Farm. (Archer) Aug. 15. For the past week the weather has been warm and sultry. Maximum temperature, 91.5 degrees; minimum, 48.5. Harvesting of variety plats of winter and spring wheat, oats and barley is completed. Flax varieties are beginning to ripen.

Harvesting of wheat and oats on the Dry-Land Agriculture plats has been completed. Corn has practically stopped growing and ears are developing quite rapidly.

Prof. W. W. Burr, of the Office of Dry-Land Agriculture, visited the station on August 8.

SOUTH DAKOTA:

Highmore Substation. Aug. 18. A precipitation of 0.5 of an inch occurred August 17, and will greatly benefit both the millets and grain sorghums. The latter crop is very promising at present.

NORTH DAKOTA:

Dickinson Substation. Aug. 18. Maximum temperature for the week, 97 degrees; minimum, 50. Total precipitation, 2.23 inches; part of this in the form of hail. Harvesting has been practically completed.

Messrs. C. H. Clark and C. W. Warburton, of the Office of Cereal Investigations, visited the station during the week of August 10.

Williston Substation. Aug. 16. Weather the past week has been hot, with a maximum temperature of 95 degrees; minimum, 49. Precipitation, 1.52 inches. Grains have ripened rapidly. Harvesting of all grain has been completed, with the exception of flax. Winter wheats were thrashed August 16, and the following yields obtained:

C.I. No.	Name	Yield per acre (bu.)
3330	Buffums	15.6
3084	N. Dak. Station	13.1
1442	Kharkov	9.5
3011	Eversole	8.4
1543	Beloglina	7.8
3699	Reliable	7.1
1583	Kharkov	6.8

Average yield - 8.9 bushels per acre.

MONTANA:

Judith Basin Substation (Moccasin). Aug. 16. Weather continues warm and dry. Spring wheat and flax are ripening rapidly. Thrashing commenced this week. Part of the increase field of Kharkov wheat has been thrashed in order to have seed for distribution among the farmers.

Messrs. Harlan, Warburton and Clark, of the Office of Cereal Investigations, and Mr. Arnold Yerkes, of the Office of Farm Management, visited the station during the week.

UTAH:

Nephi Substation. Aug. 15. Clear and partly cloudy weather has prevailed during the week, with a maximum temperature of 90 degrees (August 14); minimum, 47 (August 15). Total precipitation, .36 of an inch. Thrashing will commence the coming week. Seeding of the time-of-seeding winter wheat test was begun August 15. In spite of the recent rains the soil mulch was deep and very dry. Because of this a new attachment has been added to the drill for use during the early seedings.

The attachment consists of shovels so arranged in front of the disks that they remove the dry surface mulch and permit the grain to be seeded in the moist soil. Inter-tilled crops are in good condition.

CALIFORNIA:

Biggs Cereal Field Station. Aug. 2. Maximum temperature for the week, 98 degrees; minimum, 60. Italian rices are heading and are in good condition, although they contain some mixtures of water grass.

Dr. Humphrey, of the Office of Cereal Investigations, visited the station on July 30.

Aug. 9. Maximum temperature for the week, 112 degrees; minimum, 59. The Wataribune rice was badly mixed with early varieties of rice and a number of varieties of water grass, but these were removed from the plats during the week.

OREGON:

Eastern Oregon Dry-Farming Substation (Moro). Aug. 13. Mr. P. V. Cardon, now in charge of Grain Cultivation Experiments, reports that on his trip through Idaho, Oregon and Washington, he found harvesting in progress and at almost every point good yields were reported. In the Walla Walla section wheat was yielding at an average of 45 bushels to the acre, some crops yielding as high as 60 bushels. In the upper Palouse section the winter wheats were not doing as well as usual, owing to some winterkilling, but the spring varieties were doing unusually well.

At Moro, Mr. Cardon found the winter grains almost completely killed; Turkey wheat on the tillage plats coming through the winter in good condition, however. The spring grains were doing very well. Tillage and rotation work were also found in good condition.

Throughout Idaho, Washington and Oregon, field peas are being grown extensively and are making very good yields, from 20 to 30 bushels per acre. Peas,corn and potatoes, all being practical crops, should prove valuable ones in rotation with the cereals.

At a number of points composite heads were found in the plats of Black Winter emmer (C.I. No. 2337). It seems that when the stand is thin and the season abnormally wet, the occurrence of composite heads is frequent.

CORRECTION

In the Newsletter of August 1, the following item appeared under LOUISIANA, Crowley Rice Experiment Station:

"Italian rices are booting and will soon start to head. All rice plantings from the California seed contain considerable grass and weeds."

This item should have been placed under CALIFORNIA, Biggs Cereal Field Station.

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NEWSLETTER

OF THE

OFFICE OF CEREAL INVESTIGATIONS,

BUREAU OF PLANT INDUSTRY,

U. S. DEPARTMENT OF AGRICULTURE.

Volume V.

AUG 29
1913

August 29, 1913.

OFFICE NOTES

Dr. Humphrey returned August 18, from an extensive trip through the Western States, made in the interest of the cereal disease work.

Mr. Warburton returned to the Office August 27, from a two month trip through the Central and Northwestern States.

Mr. Ball returned August 29 from an inspection trip to the various experiment stations in the West.

GREAT PLAINS COOPERATIVE ASSOCIATION MEETING.

The meeting of the Great Plains Cooperative Association held at North Platte, Nebr., August 20, 21 and 22, was attended by the following members of the staff of the Office of Cereal Investigations: C. R. Ball; B. E. Rothgeb, John F. Ross and Louis Wermelskirchen, Amarillo Cereal Field Station; F. A. Kiene, Hays Branch Station; Geo. A. McMurdo, Akron Field Station; J. W. Jones, Cheyenne Experiment Farm; Cecil Salmon, Bellefourche Experiment Farm; J. D. Morrison, Highmore Substation; Manley Champlin, South Dakota Agricultural Experiment Station; J. A. Clark, Dickinson Substation; and F. R. Babcock, Williston Substation. Mr. M. A. Carleton, Cerealist, was present at the last day's session. Mr. N. C. Donaldson was not present owing to the pressure of harvest and his duties as Acting Superintendent of the Substation at Moccasin, Mont., because of the illness and absence of Superintendent J. M. Stephens.

The following papers were read by members of the Office staff:

Shifting Variety Trial and a Method of Interpreting Results,
by J. A. Clark.

Review of Cereal Work in South Dakota,
by Manley Champlin.

Significance and Probable Cause of Sterile Florets in Wheat and Other Small Grains in the Great Plains,
by Cecil Salmon.

Some New Methods in Nursery Planting and Their Advantages,
by F. R. Babcock.

The Dry-Land Experiment Farm at Archer, Wyoming,
by Jenkin W. Jones.

Community Growing of Crop Varieties,
by C. R. Ball.

Mr. Ball reports that this meeting of the Great Plains Cooperative Association was the largest and best attended of any yet held, although a larger number of men representing the different state stations would have been desirable. The meeting for 1914 will be held at the Hays Branch Station, Hays, Kansas.

FIELD NOTES.

Mr. C. H. Clark has been pursuing his flax investigations in the states of North Dakota and Montana, and the provinces of Alberta, Saskatchewan and Manitoba, Canada. He is now at Fargo, N. Dak., where he will stay until the arrival of Mr. Carleton.

Mr. Cardon has finished his investigations in Oregon and has proceeded to the Sacramento Valley of California.

VIRGINIA:

Arlington Experiment Farm. Aug. 27. Weather during the past week has been cool, with a maximum temperature of 89 degrees (August 26); minimum, 57 (August 22). A precipitation of .16 of an inch occurred on the 23d. The grain from the field plats of winter rye, spelt and emmer has been weighed and tested with the following results:

C.I.No.	Name.	Yield per acre (bu.)	Weight per bushel (lbs.)
	Rye		
40	Abruzzes	37.9	56
73	(Spring as Winter)	36.1	55
138	Henry	34.3	54
30	Giant Winter	32.9	53.5
108	Mexican	28.2	54
128	Virginia Winter	27.2	52
127	Arlington Winter	26.8	56
126	Rimpau	25.7	50.5
34	Ivanov	21.4	56
	Spelt		
1772	Red Awnless	54.0 (1620 lbs.)	30
1773	Alstroum	46.7 (1540 ")	33
3264	Alstroum	44.8 (1480 ")	33
1724	White Bearded	48.3 (1450 ")	30
	Emmer		
2337	Black Winter	22.8 (615 ")	27

MONTANA:

Judith Basin Substation (Moccasin). Aug. 23. Weather continues warm and dry. Spring wheat and flax are ripening rapidly. It is probable that the quality of the spring wheat will be poor. Harvesting and thrashing is progressing rapidly. Some good yields have been obtained, the plat of Kharkov wheat seeded September 1 yielding at the rate of 45 bushels per acre.

IDAHO:

Aberdeen Substation. Aug. 25. Thrashing is nearly completed. Wheats on the dry-farm are yielding from 12½ to 48½ bushels per acre. Barley on the irrigation farm is yielding from 45 to 71 bushels per acre.

UTAH:

Nephi Substation. Aug. 22. Partly cloudy weather has prevailed during the week, with a maximum temperature of 93 degrees; minimum, 49. Thrashing of the winter and spring nursery grains was completed August 21. Spring oats averaged 18.5 bushels per acre. The spring durum wheats gave good yields, and are very promising as a dry-farming crop in this section.

OREGON:

Eastern Oregon Dry-Farming Substation (Moro) Aug. 17. The weather during the first week of August was warm, with a maximum temperature of 92 degrees (August 3 and 4). Since then moderate and cool weather has prevailed, a minimum temperature of 38 degrees being recorded. Precipitation of .05 of an inch occurred on August 11. Twenty of the field pea varieties, 30 plats of the winter tillage experiments, and 16 plats of spring wheat on the rotation experiments have been thrashed. The highest yield of peas so far was 26 bushels per acre, which exceeds the highest yield last year by 7 bushels per acre. On the tillage experiments with winter wheat, plat 186 gave the highest yield, 30 bushels per acre. This plat received good cultivation until seeding time and no cultivation after seeding. The lowest yield obtained was from plat 387, 6.5 bushels per acre. This plat was plowed June 1, 1912, harrowed thoroughly, packed with Campbell packer, and harrowed once after the crop was up. In this test this year, the results are strikingly in favor of early plowing for summer fallow. The highest yield of spring wheat on the rotation plats was 29 bushels per acre after summer fallow.

Prof. H. D. Scudder, of the Oregon Agricultural Experiment Station, and Messrs. Ball and Cardon, of the Office of Cereal Investigations, visited the station during the week.

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NEWSLETTER

OF THE

OFFICE OF CEREAL INVESTIGATIONS,

BUREAU OF PLANT INDUSTRY,

U. S. DEPARTMENT OF AGRICULTURE.

Volume V.

SEP 5
1913

September 5, 1913.

NOTICES TO FIELD MEN.

When field men desire leave during travel, two conditions must be observed: first, leave must be requested on the white travel-leave blank as well as on the regular application for annual leave; second, the places at which leave is requested must be on the direct route between two points where official business is conducted.

Field men should send in as promptly as possible lists of cereal varieties for distribution, in all cases giving varietal name, C. I. Number, and quantity. Prompt attention should also be given to the request now being sent for a small supply of various staple varieties for use in the laboratory in filling foreign orders and other miscellaneous requests.

FIELD NOTES.

VIRGINIA:

Arlington Experiment Farm. Sept. 3. Clear and partly cloudy weather has obtained during the week, with a maximum temperature of 94 degrees (Aug. 27); minimum, 61 (Aug. 31). A precipitation of 1.12 inches occurred on the 31st. Total precipitation for August, 5.13 inches. The grain from the field plats of winter barley varieties has been graded and tested, with the following results:

YIELDS OF FIELD PLATS OF WINTER BARLEY.

C.I.No.	Name	Yield per acre (bu.)	Weight per bushel (lbs.)
646	Tenkau	39.6	46
277	Scottish Pearl	36.0	42
194	Telli	31.5	43
519-VIII	Wisconsin Winter	31.4	46.5
252	Square Grained Winter	30.8	44
408	Large " "	30.4	44
895	(Hybrid)	28.8	46
182	Odessa	28.5	44
648	Virginia Hooded	28.4	40
191	-------	28.3	43

C.I.No.	Name	Yield per acre (bu.)	Weight per bu. (lbs.)
896	(Hybrid)	28.1	42
278	Tanbash	27.9	45
534	Alaska	27.5	41
611	Blue Ribbon	26.0	46.5
187	Swan Neck (2-rowed)	25.3	45.5
898	(Hybrid)	25.0	45
713	Canada Winter	25.0	42
199	Allacete	24.2	44
647	Two-rowed Winter	24.0	46
221	Greece	22.6	45
554	Texas Winter	22.5	44
539	-------	22.0	46
518	Maryland Winter	21.5	45
257	Tennessee Winter	21.3	(Av.of check plats) 44
78	Sangatsuka Hull-less	19.0	58
287	Hanna (2-rowed)	18.8	46
202	Black Arabian (2-row)	18.5	44
223	Argentine	16.7	45
612	-------	16.5	44
702	Arlington Awnless	16.0	47.5
156	Chevalier (2-rowed)	14.6	49
203	-------	12.1	45
414-1	Bestehorn's Giant	10.0	43
195	White Smyrna (2-rowed)	8.8	45
712	Hexicon	4.2	38

KANSAS:

Hays Branch Experiment Station. Aug. 27. Weather continues hot and dry, with the average maximum temperature reaching 100 degrees or over, 105 degrees being the maximum for this week; minimum 51. There has been no precipitation.

COLORADO:

Akron Field Station. Aug. 30. Hot, dry weather continues. The thrashing of wheat, oats, and barley has been completed, and the following representative yields obtained:

C. I. No.	Name	Yield per acre (bu.)
	Winter Wheat	
1583	Kharkov	17.4
1559	Crimean	17
1442	Kharkov	16

Spring Wheat

2397	Erivan	12
1493	Arnautka	10
1517	Spring Ghirka	9.1

Oats

759	Kherson	40
619	Colo. No. 37	32
165	Sixty Day	28

Barley

203	Hanna	28
602	Hannchen	25
690	California Feed	20

WYOMING:

Cheyenne Experiment Farm (Archer). Aug. 30. Weather for the past week has been variable, with local showers. Maximum temperature for the week, 92.5 degrees; minimum, 49. Precipitation, .32 of an inch. Harvesting of all small grains has been completed.

Most of the fall plowing on the Dry Land Agriculture rotation plats has been completed.

SOUTH DAKOTA:

Bellefourche Experiment Farm (Newell). Aug. 30. Weather continues very dry. Thrashing is completed, except for a part of the nursery. Yields of winter wheat ranged from 15 to 45 bushels per acre, and those of spring wheat from 10 to 20 bushels. The yields of both oats and barley were very low, due to their being grown on ground cropped last season. The soil is so dry at present that it is impracticable to seed winter wheat in the time-of seeding test.

Highmore Substation. Aug. 30. The continued hot, dry weather of the past two weeks will lower the yields of the grain sorghums and millets. The grain sorghum heads are well filled but the kernels will be rather small because their maturity has been so hastened by the drought. The greater part of the millets are harvested and some of the Kursk selections promise good yields.

NORTH DAKOTA:

Dickinson Substation. Aug. 30. Maximum temperature for the week, 94 degrees; minimum, 42. Precipitation, a trace. Precipitation for August was 2.70 inches; the normal is 2.04 inches. This is the first month this year during which the rainfall has been above normal. Winter wheat varieties grown on summer-fallowed ground have been thrashed, and yielded between 1 and 9 bushels per acre.

Williston Substation. Sept. 1. On August 18 a precipitation of nearly 3 inches occurred within a period of 8 hours. Thrashing of all of the wheat and part of the oat varieties on the varietal plats has been completed. The spring wheat varieties have been yielding from 18 to 35 bushels per acre.

Mr. Carleton visited the station August 31.

UTAH:

Nephi Substation. Aug. 29. Weather continues hot. On August 23 a precipitation of .87 of an inch occurred in 45 minutes, and the resulting flood washed away much of the soil on the station. Considerable damage was done to grain in the shock. Thrashing is in progress.

CALIFORNIA:

Biggs Cereal Field Station. Aug. 10 to 30. Weather has been hot and dry, with a maximum temperature of 111 degrees (Aug. 23); minimum, 54 (Aug. 14). Rice is growing rapidly and most of it is in the boot. Many of the fields of the commercial varieties are heading, and the Italian rices will be harvested next week. Barnyard Millet (*Panicum crusgalli*) is causing much trouble both on the station and the surrounding rice farms.

Mr. C. R. Ball and Dr. Thomas F. Hunt, Director of the California Experiment Station, visited the station on August 15.

OREGON:

Eastern Oregon Dry-Farming Substation (Moro). Aug. 24. Weather the past week has been hot and dry, and hot, east winds have prevailed. Maximum temperature, 94 degrees; minimum, 41. All of the barley varieties and some of the oats have been thrashed, and the yields of both these crops are considerably higher than have ever been obtained before on this station. One plat of Sixty-Day oats yielded at the rate of 66.5 bushels per acre. The five highest-yielding barley varieties are as follows:

Hannchen No. 531	50.2 bu. per acre
Ouchac	42.0 " " "
Mariout No. 261	40.6 " " "
Swanneck No. 187	39.1 " " "
"O.A.C. Mandeschuria"	38.7 " " "

Harney Branch Station (Burns). Aug. 29. Harvesting of varietal and increase plats has been in progress during the past two weeks, and will be completed today. Thrashing will begin September 2. All grains give promise of good yields, as do the field peas and flax.

On August 18 a hard frost occurred which damaged some of the later cereal varieties not then ripe. A couple of light showers have occurred but no damage has resulted from them.

Messrs. Cardon and Ball, of the Office of Cereal Investigations, and Professors Scudder and McCool, of the Oregon Agricultural College, have visited the station recently.

NOTES FROM MR. CARDON:

Under date of August 31, Mr. Cardon writes as follows: "Since writing you last, I have visited points in western Oregon, northern California, and western Nevada. At Corvallis I found the crops harvested, but I succeeded in getting some information despite that fact. Little has been done there in the way of cereal rotation or cultivation work, but plans are complete for a series of such tests to begin this fall. Some extensive tests with soiling crops, also, will be commenced.

From Corvallis I went to Eugene, Oregon, in the upper Willamette Valley. The cereal crops looked rather poor in this section and I think that this condition was due to the fact that the land has been so long cropped to cereals without rotation. A diversification of crops, undoubtedly, is needed in the Willamette Valley. This is true also in the Rogue River Valley which I visited later.

At Klamath Falls I visited the exposition and some of the meetings of the Eastern Oregon Development League which was in session at that place, August 19, 20, and 21. Here I conversed with farmers who are farming various types of Oregon soil, such as tule land, pumice soil and adobe soil, as well as the red land and the white land which is found throughout most of the state. Crops grown on these soils were shown and from these I was able to judge something of the possible agricultural value of these lands.

Next day I visited the Plant Introduction Garden at Chico, and from these I went to Biggs, Calif., where I remained with Mr. Adams for over two days, visiting the station and some of the surrounding territory. Then I went to San Francisco, from which point I visited the University of California at Berkeley. There I met Dean Hunt and Prof. Gilmore, with whom I talked of cereal work in California. At Davis the next day, we were shown over the University Farm by Mr. Van Norman.

Next day I visited the farm of the University of Nevada at Reno. Professor Knight was just returning to Reno to take charge of the cereal work. I did not get to see him, but I was shown around by Mr. Clark, foreman. Leaving Reno at night I arrived in Salt Lake City the next afternoon.

I arrived at Nephi last night and I will stay here for a few days in order to assist in the planning of the fall work at this point."

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NEWSLETTER

OF THE

OFFICE OF CEREAL INVESTIGATIONS,

BUREAU OF PLANT INDUSTRY,

U. S. DEPARTMENT OF AGRICULTURE.

Volume V.

SEP 12
1913

September 12, 1913.

NOTICES TO FIELD MEN

Telegrams

The word "Agriculture" should always be included in the address of official telegrams sent to the staff of this Office in Washington. A recent telegram addressed "M. A. Carleton, Washington, D. C.," was delayed 36 hours because of the insufficient address. The correct address for this telegram would have been "M. A. Carleton, Agriculture, Washington, D. C." or "Cerealist, Agriculture, Washington, D. C."

Freight and Express Charges

In shipments of Government property by freight or express on Department bill of lading, obtain cost of transportation wherever possible and note on memorandum bill of lading. This is very essential.

OFFICE NOTES.

Mr. Alden A. Potter returned to the Office on September 9, after making extensive field trips and conducting experiments at University Farm, St. Paul, Minn., in the interest of cereal disease investigations.

Mr. H. B. Derr leaves the Office, September 15, to accept a position as County Agricultural Adviser, of Scott County, Missouri. His work will be in cooperation with the Office of Farm Management of this Bureau.

FIELD NOTES.

VIRGINIA:

Arlington Experiment Farm. Sept. 10. Maximum temperature for the week, 94 degrees (Sept. 7); minimum, 50 (Sept. 10). Precipitation of 1 inch has occurred. The following yields were obtained from the field plats of wheat varieties:

C.I.No.	Name.	Yield per acre. (bu.)	Weight per bu. (lbs.)
1915	Purple Straw	34.7	62
1744	Early Genesee Giant	28.4	60
1979	Poole	26.6	61
1945	Lancaster	26.5	60
1930	Rocky Mountain	26.2	60.5
1733	Dawson's Golden Chaff	25.8	60
2008	Mammoth Red	25.2	60
1942	Bearded Winter Fife	24.9	60
1933	Jones' Winter Fife	24.7	61
1957	Fultzo-Mediterranean	24.2	62
1949	Maryland Flint	23.5	60
1745	Rieti	23.3	60
1911	Bearded Purple Straw	23.2	60
1944	Little Club	22.8	60
1923	Fultz	22.7	61
1973	New Amber Longberry	22.7	59
1912	Bluestem	22.5	60
2980	Stoner (Miracle)	22.0	61.5
3610	(Hybrid)	22.0	61
180	China Red	21.8	61
3617	(Hybrid)	21.8	61
1732	Fish-head	21.7	60
1981	Dietz Longberry (Av. of check plats)	21.1	61
1969	Michigan Amber	21.0	61
3277	Virginia Hybrid	21.0	60
3618	(Hybrid)	20.8	61
3326	Currell's Prolific	20.2	60
1974	Martin's Amber	20.0	59
3613	(Hybrid)	19.7	59
3608	(")	19.7	63
3612	(")	19.5	58
3638	--------	19.3	60
1980	Fultzo-Mediterranean	19.2	61
3614	(Hybrid)	19.2	59
3609	(")	18.1	59
3640	--------	17.6	60
2496	Jones' Silver Sheaf Longberry	17.5	60
3615	Acme Bred Kharkov	16.2	61
3616	(Hybrid)	16.1	59
3611	(")	15.7	61
1586	Berdiansk	13.7	61

LOUISIANA:

Crowley Rice Experiment Station. Aug. 18 to 31. Weather during this period has been very good for the harvesting which has been in progress. Maximum temperature, 95.5 degrees (Aug. 29);

minimum, 67.5 (Aug. 25). Total precipitation, .64 of an inch. Harvesting of rice plats on the station was commenced the week of August 24, and both harvesting and thrashing of Honduras rice is in progress on the surrounding farms.

Demonstration Day was held on the station on August 33, and was attended by between 150 and 200 farmers, who showed a keen interest in the work being done. Addresses were delivered by Messrs. W. R. Dodson and Henry Staples, of the Louisiana Experiment Station; Mr. J. S. Webb, of the Bureau of Entomology; Mr. C. E. Chambliss, of the Office of Cereal Investigations; and Messrs. F. C. Quereau and J. Mitchell Jenkins of the Crowley Rice Station.

TEXAS:

Beaumont Cooperative Rice Experiment Station. Aug. 10 to Sept. 6. Weather has been generally fair, with only a few showers, and the temperature has been slightly lower. Harvesting of rice is in progress.

Dr. LeClerc, of the Bureau of Chemistry, and Mr. Chambliss visited the station on Sept. 2, and the latter left on the 4th for California.

Amarillo Cereal Field Station. Sept. 6. Maximum tempera ture for the week, 93 degrees; minimum, 57. Precipitation of .28 of an inch has occurred in the form of showers. The fall plowing for the depth-of-plowing test has been completed. Owing to the dry subsoil it was necessary to follow the sulky plow with a walking plow, in order to reach the required depth. Thrashing of grain from the nursery plats is in progress. All grain-sorghum plats, except five of the late planted, and the thin rate-of-seeding of Dwarf milo, Sudan durra and Dwarf kafir, have been harvested. The grain yield on these plats will be small. The milos, durras and kaoliangs produced some heads, most of them at the ends of the rows, and the grain yield would have been fairly good had not the birds almost totally destroyed them. The Dwarf milo on the fallow plats in the cultivation experiments is good for such a dry year. The estimated yield of these plats is from 18 to 20 bushels per acre.

Mr. Rothgeb will leave on September 8 for a field trip through the northwest part of Oklahoma, in the interest of grain-sorghum and broomcorn investigations.

KANSAS:

Hays Branch Experiment Station. Sept. 6. Maximum temperature for the week was 105 degrees; minimum, 65; and average maximum, 99.3 degrees. There has been no precipitation to date.

The first seeding in the rate and date test of winter wheat, which consists of five rates on five different dates seeded in duplicate, is being sown today.

Sept. 9. The dry weather was broken by a precipitation of .13 of an inch on September 8, and several light showers on the morning of September 9.

Mr. Carleton visited the station September 8.

COLORADO:

Akron Experiment Farm. Sept. 6. Maximum temperature for the week, 93 degrees; minimum, 54. Precipitation has been too slight to be of any value. Thrashing of winter grains for the nursery has been completed. Buckwheat has been harvested. The grain sorghums are ripening rapidly.

WYOMING:

Cheyenne Experiment Farm (Archer). Sept. 5. Maximum temperature for the week, 81 degrees; minimum, 50. Precipitation, 1.48 inches. Beacuse of the stormy weather it has been impossible to thrash any of the field plats, and the rain has caused the loose grain at the bottom of the shocks to begin to mold and sprout. All harvesting is completed except the corn and sorghums; the rod-rows have been thrashed. Freed, South Dakota Amber and Early Amber sorgos are fully headed.

Corn is beginning to dent, and if there is no frost during the next two weeks, most of it will mature.

SOUTH DAKOTA:

Highmore Substation. Sept. 8. Weather during the past week has been hot and dry, a maximum temperature of 106 degrees being recorded on September 5. Grain sorghum and corn have ripened rapidly during this hot weather, too rapidly in fact to produce the best quality of grain. Fall seeding of the winter grain nursery is nearly completed.

UTAH:

Nephi Substation. Sept. 5. The past week has been hot and sultry, with partly cloudy weather prevailing. Maximum temperature for the week, 80 degrees (Sept. 3); minimum, 47 (Sept. 4). Precipitation, .40 of an inch. The rain has materially aided in the preparation of the soil for seeding this fall. Thrashing has been completed and preparations are now being made for the fall seeding.

Mr. P. V. Cardon visited the station during the week.

OREGON:

Eastern Oregon Dry-farming Substation. (Moro). Aug. 25 to Sept. 6. The last week of August was warm, with a maximum temperature of 90.5 degrees on the 28th. Total precipitation for the month of August was .05 of an inch, and for July and August .11 of an inch. The first week of September was cooler, with a maximum temperature of 79 degrees and a minimum of 43. On September 2 a precipitation of .14 of an inch occurred. All thrashing, except of the nursery, has been completed. Some of the highest yields obtained are as follows:

C.I.No.	Name	Yield per acre (bu.)
	SPRING WHEAT	
2495	---------	27.5
2203-2	Koola	25.8
1697	Early Baart	25.0
2200-1	Karun	24.0
2407-2-1	Aulieata	23.0
----	Marquis	22.1
2669	Bearded Square-head	21.6
2404-1-1	Yantagbay	21.3
----	Oregon Bluestem	19.6
	OATS	
165	Sixty Day selection	66.5
---	Local variety	54.3
635	Siberian	53.7
444	Canadian	47.4
522-1	Storm King	45.2
459	Kherson	44.7
549	Black American	44.3
	SPRING RYE	
73	S.P.I.No. 26101	16.0
	SPRING EMMER	
1524	--------------	29.0
	WINTER EMMER	
2337	Black Winter	28.0
2483	Black Velvet	22.5
----	Buffum's Improved	21.0

Of the 40 varieties of Canada field peas tested, 12 gave yields exceeding 20 bushels per acre, the highest being the Carleton, S.P.I.No. 12887, with a yield of 27.3 bushels per acre. This variety gave the highest yield last year.

Prof. Wm. Stuart, Expert in Charge of Potato Investigations, visited the station on September 4 and 5.

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NEWSLETTER

OF THE

OFFICE OF CEREAL INVESTIGATIONS,

BUREAU OF PLANT INDUSTRY,

U. S. DEPARTMENT OF AGRICULTURE.

Volume V.

SEP 19

1913

September 19, 1913.

NOTICE TO FIELD MEN

Please notify the Office at once of approximate date of leaving stations for Washington to spend the winter months and state expected length of stay in Washington. This information is needed immediately in order to plan for desk space.

OFFICE NOTES

Mr. Carleton returned on the 12th from a tour of inspection of some of the Western stations.

FIELD NOTES

VIRGINIA:

Arlington Experiment Farm. Sept. 17. Weather the past week has been cool, with a maximum temperature of 79 degrees (Sept. 12) and a minimum of 42 (Sept. 14). No precipitation has occurred. Following are the results from the rate-of-seeding test of winter wheat:

C. I. No. 1923, Fultz

Rate of seeding. Pk.	Yield per acre. Bu.	Yield per acre duplicate plat. Bu.	Average yield per acre. Bu.
2	17.0	21.1	19.1
3	22.0	23.3	22.7
4	23.8	25.6	24.7
5	23.5	25.7	24.6
6	23.7	24.3	24.0
7	18.2	24.3	21.3
8	25.0	24.5	24.8

C. I. No. 1981, Dietz Longberry

Rate of seeding Pk.	Yield per acre Bu.	Yield per acre dupli cate plat. Bu.	Average yield per acre. Bu.
2	18.7	19.0	18.9
3	20.0	19.7	19.9
4	15.3	18.2	16.8
5	19.7	17.7	18.7
6	22.5	16.3	19.4
7	19.7	15.0	17.4
8	20.5	18.9	19.7

C. I. No. 2980, Stoner (Miracle)

Rate of seeding Pk.	Yield per acre Bu.	Yield per acre dupli cate plat. Bu.	Average yield per acre. Bu.
2	17.3	17.5	17.4
3	18.3	18.3	18.3
4	16.9	17.3	17.1
5	17.3	17.7	17.5
6	14.3	15.0	14.7
7	15.3	13.6	14.5
8	14.7	17.3	16.0

C. I. No. 1974, Martin's Amber

Rate of seeding Pk.	Yield per acre Bu.	Yield per acre dupli cate plat. Bu.	Average yield per acre. Bu.
2	19.8	16.5	18.4
3	21.6	17.7	19.7
4	19.0	19.0	19.0
5	18.3	16.1	17.2
6	20.0	14.7	17.4
7	15.3	9.5	12.4
8	14.7	-----	14.7

AVERAGE OF THE FOUR VARIETIES

Pecks	Bushels
2	18.5
3	19.9
4	19.4
5	19.5
6	18.5
7	16.4
8	18.8

LOUISIANA:

Crowley Rice Experiment Station. Sept. 6. Maximum temperature for the week, 92.5 degrees (Sept. 2); minimum, 68 (Sept. 6). Total precipitation, .31 of an inch. Cloudy weather and variable winds have prevailed. Harvest is well under way.

Messrs. C. G. Haskell, Office of Experiment Stations, F. B. Wise, Office of Grain Standardization, and S. T. Chenge, Chinese student at the University of Missouri, visited the station during the past week.

Japanese rices, the principal varieties grown in the neighborhood of the station, are being harvested. In the vicinity of Rayne, practically all the Honduras rice, the principal variety grown in that section, is harvested and thrashed.

Sept. 13. Maximum temperature the past week, 86.5 degrees; minimum, 70.5. Rain has fallen every day the past week, the total precipitation being 3.32 inches. This has greatly retarded harvesting operations. A continuance of the unfavorable weather will greatly damage the large number of rice varieties which are now ripe.

Farmers in the vicinity have done very little harvesting or threshing, and are apprehensive that the weather will cause rice to sprout in the shock.

TEXAS:

Beaumont Cooperative Rice Experiment Station. Sept. 13. Rainfall has been almost continuous the past week, causing considerable loss at the harvesting period, and delaying harvesting operations on the station.

Amarillo Cereal Field Station. Sept. 13. Cloudy weather has prevailed during the past week, and a total precipitation of 2.6 inches has occurred. Maximum temperature, 83 degrees; minimum, 67. Most of the rain fell on Sept. 10 and 11, and penetrated to a considerable depth, the soil being still too wet to plow. This may result in some plant growth even at this late date, especially among the kafirs. The sod land is wet to a depth of six or seven inches, and the cultivated land to the depth of plowing, or deeper. The soil will be in excellent condition for fall seeding.

The shortage of feed crops in this vicinity has caused the farmers to sow wheat or rye immediately for winter pasture.

The first annual meeting of the Panhandle State fair will be held at Amarillo from October 6 to 11. This new organization is the result of a movement begun many months ago for the improvement of the entire Panhandle section.

WYOMING:

Cheyenne Experiment Farm (Archer). Sept. 13. Weather the past week has been favorable for thrashing, which is still in progress. Frost occurred on the night of the 11th, at a temperature of 38 degrees. Maximum temperature the past week, 84.5 degrees; minimum, 38. Only a trace of precipitation has occurred. Winter wheats, spring oats, barley, and practically all of the spring wheats have been thrashed. Yields will be lower than at first anticipated. Winter wheat varieties were sown on the 9th and 10th. As the seed-bed was in good condition, rapid germination and a good stand should result.

NORTH DAKOTA:

Dickinson Substation. Sept. 15. Maximum temperature the past week, 88 degrees; minimum, 28. Total precipitation, .10 of an inch. The first frost of the season occurred on the morning of the 11th, at a temperature of 28 degrees. Thrashing of the oat varieties is completed, the yields varying from 40 to 70 bushels per acre. Golden Rain and Victory produced the highest actual yields. Seeding of fall grains is completed, and the plats in which some moisture was stored have emerged. Unless rain occurs soon very uneven stands will result.

Idaho:

Aberdeen Substation. Sept. 11. Following are some of the yields obtained at this station:

Wheat:

Name	C. I. No.	Bu. per acre.
Defiance	3703	55.0
Dicklow	3663	61.5

Barley:

Name	C. I. No.	Bu. per acre.
A Chinese 6-rowed type	206	78.0
Svanhals types		71.0

Oats:

Name	C. I. No.	Bu. per acre.
Golden Rain	493	126.0
Swedish Select	134	102.0
Big Four	725	98.0

UTAH:

Nephi Substation. Sept. 12. Weather continued hot and dry. Maximum temperature for the week, 86 degrees (Sept.13); minimum, 45 (Sept. 10). Total precipitation, .16 of an inch. The varieties of wheat which produced the highest yields at the station this season are as follows:

C.I.No.	Variety	Yield per acre. Bu.	Weight per bushel. Lbs.
2048	Bulgarian	12.2	60.0
1571	Turkey	11.9	60.0
1756	(From Missouri)	11.9	60.9
1564	Pesterboden	11.9	60.5
1559	Crimean	11.7	61.0
1438	Ghirka	11.3	62.0
1436	Crimean	11.3	62.0
2998	Turkey	11.0	62.0
1437	Crimean	10.3	61.5
1355	Armavir	10.3	60.5

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NEWSLETTER

OF THE

OFFICE OF CEREAL INVESTIGATIONS,

BUREAU OF PLANT INDUSTRY,

U. S. DEPARTMENT OF AGRICULTURE.

Volume V.

SEP 26

1913

September 26, 1913.

NOTICE TO FIELD MEN.

C. H. Clark requests that on those stations where a certain flax variety has been used as a check for the ceries at least two quarts be saved from each plat for individual oil content determinations. These with a similar sample from each varietal plat will be requested later.

OFFICE NOTES.

During the past week Messrs Clark, Cardon and Harlan have returned from their summer field work.

FIELD NOTES.

VIRGINIA:

Arlington Experiment Farm. Sept. 24. Weather during the pastcweek has been cool and wel, with a maximum temperature of 82 degrees (Sept. 17), and minimum of 39.5 (Sept. 23). Precipitation for the week, 1.61 inches. The recent rains have materially aided in preparation of the soil for seeding this fall. The seeding of winter oats will be begun in a few days.

TEXAS:

Amarillo Cereal Field Station. Sept. 20. Maximum temperature for the week 83 degrees; minimum, 69. Precipitation, .44 of an inch. Native grass, cowpeas, and sorghums made some growth during the week. Cleaning and testing of grains is progressing. Preparations for planting the fall nursery are well under way.

R. W. Edwards, of the Office of Forage Crop Investigations, visited the station on Sept. 9th, and Messrs. Cole and Griggs, of the Office of Dry-Land Agriculture, on the 19th.

KANSAS:

Hays Branch Station. Sept. 20. The drought has broken and the temperature for the past week has been much lower. Maximum temperature, 78 degrees; minimum, 35. Precipitation of 2.14 inches has occurred, which has put the ground in splendid condition for fall seeding. The second date seeding of the rate and date test with winter wheat was made Sept. 20. On September 22 the seeding of the 960 head rows will begin, and varietal seeding will follow.

COLORADO:

Akron Field Station. Sept. 15. Weather conditions the past week have delayed seeding. Soil is very dry and a precipitation of .43 of an inch soon evaporated. Thrashing of the spring nursery is in progress. The grain sorghums are filling well, and some of the kaoliangs have been harvested.

Dr. H. L. Shantz returned to the station September 11.

Sept. 20. Weather continues cool and dry, with a maximum temperature of 87 degrees, and minimum 32. Precipitation, .10 of an inch. Flax, buckwheat and millets were thrashed this week. Fall seeding is still delayed by lack of moisture.

WYOMING:

Cheyenne Experiment Farm (Archer). Sept. 20. Frost, which occurred the night of Sept. 19, prevented the maturing of corn, grain sorghums or sorgos. Most of the corn, Freed and South Dakota Amber sorgos, and a few heads of two kaoliangs, C. I. 171 and 261, were in the hard dough stage. The winter wheats are coming up nicely. Thrashing was completed today, and the following maximum yields obtained:

Grain	Variety	C. I. No.	Yield
Winter wheat	Malakoff	2908	11 bushels
Durum spring wheat	Arnautka	1493	10 "
Common " "	Spring Turkey		16.7 "
Oats "	Kherson	459	17.3 "
Barley "	Svanhals	187	13.2 "
Flax	N. Dak. 1215	3	7.4 "
Proso (millet)		113	23. "

SOUTH DAKOTA:

Bellefourche Experiment Farm (Newell). Sept. 30. A precipitation of 1.65 inches which occurred during the first half of the week put the soil in excellent condition for seeding winter wheat. Variety, rate, and part of date of seeding tests were sown during the week; also about 150 selection rows.

Highmore Substation. Sept. 30. Weather conditions during the past week have been favorable for the seeding of winter grain. Enough rain has fallen to start the winter rye sown in the cornstalks, but hardly enough to start winter wheat on corn ground. Winter grain on fallowed ground is doing well.

Experiment Station (Brookings). Sept. 19. Mr. Champlin reports as follows: "We are very much gratified with our results here at Brookings this year, and find in brief that there is a marked effect due to early seeding and to treating seed of barley by the specific gravity method. Our best barley plats yielded over 70 bushels per acre and out best oat plats over 100 bushels per acre."

IDAHO:

Aberdeen Substation. The yields of grain given in the Newsletter of Sept. 19, were obtained under irrigation.

UTAH:

Nephi Substation. Sept. 19. Maximum temperature for the week, 87 degrees (Sept. 18); minimum, 41 (Sept. 16). Precipitation of .34 of an inch occurred on the 13th and 14th. The seeding of the time of seeding test of the following winter cereals was done Sept. 15: Turkey wheat (C. I. 2998), Koffoid wheat (C. I. 2997), Boswell Winter oats (C. I. 480), Utah Winter barley (C. I. 592), and Black Winter emmer (C. I. 3337). Seeding of the field plats of winter cereals was begun Sept. 16.

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NEWSLETTER

OF THE

OFFICE OF CEREAL INVESTIGATIONS,

BUREAU OF PLANT INDUSTRY,

U. S. DEPARTMENT OF AGRICULTURE.

Volume V.

OCT 3
1913

October 3, 1913.

OFFICE NOTES

Members of the Office and others interested will note that hereafter Mr. Carleton R. Ball will be in direct charge of Western Wheat Investigations and will also continue to be first assistant to the Cerealist, and Acting Cerealist in his absence.

Mr. John H. Parker arrived in Washington on Sept. 30th from University Farm, St. Paul, Minn., to begin laboratory work as assistant in cereal disease investigations.

Mr. Cecil Salmon, of the Bellefourche Experiment Farm, resigned on Sept. 30 to accept a position at the Kansas State Agricultural College, Manhattan, Kans.

Mr. H. V. Harlan, in charge of the barley investigations of this Office, will sail ~~for~~ New York on October 11 for the purpose of undertaking some agricultural investigations for the Peruvian Corporation on the Titicaca highlands in southern Peru. The plateau about Lake Titicaca is at an elevation of from 12,600 to 14,000 feet. Agriculturally, it is but little developed, the industries being confined largely to grazing, although a little barley and occasionally a little corn are grown. It is the hope of the Peruvian Corporation to be able to develop a profitable agriculture in this region, and at least to secure tree growth, which at present is not found above the canons.

Mr. Harlan will be on leave of absence from the Department for six months.

NOTICE TO FIELD MEN

No attendance at fairs or participation in the judging of exhibits will be permitted without first obtaining permission from the Chief of the Bureau through this Office.

FIELD NOTES

VIRGINIA:

Arlington Experiment Farm. Oct. 1. Clear and partially cloudy weather has prevailed the past week. No precipitation has occurred. Maximum temperature, 81 degrees (Sept. 29); minimum, 39 (Sept. 28). Total precipitation for September, 2.61 inches. Seeding of winter oats was begun Sept. 29. All winter barley seedcto be grown in field plats has been treated with formalin for covered smut.

TEXAS:

Amarillo Cereal Field Station. Sept. 27. A precipitation of 2.10 inches has occurred the past week, and rain still continues to fall. Maximum temperature, 89 degrees; minimum, 40. Total precipitation for September, 5.42 inches; for 1913 to date, 13.84 inches. At present, the soil is too wet for field work. The work of preparing seed for planting the fall nursery is completed.

Mr. H. M. Cottrell, Agricultural Commissioner for the Rock Island lines, and Dr. H. E. Horton of Chicago, visited the station today. Dr. Horton is interested in the machinery for planting grain sorghums.

COLORADO:

Akron Field Station. Sept. 27. Weather the past week has been cool, with a maximum temperature of 76 degrees and a minimum of 27. Total precipitation, .39 of an inch. Seeding of winter wheat varieties has been completed, and the soil appeared to be in condition to insure germination. Thrashing of the nursery varieties is progressing. Grain sorghums have been harvested.

SOUTH DAKOTA:

Highmore Substation. Sept. 27. Weather conditions the past week have been favorable for field work. Work is progressing nicely, and it is expected that thrashing of the head-row nursery will be begun shortly. Winter rye seeded on plats previously cropped to corn is making a very uneven stand. There was not sufficient moisture in the soil to insure a stand of wheat under the same treatment.

NORTH DAKOTA:

Dickinson Substation. Sept. 24. A snow storm which has been in progress for the past two days has put a stop to thrashing operations. Thrashing of oat and barley varieties and most of the wheat varieties is completed. Following are some of the yields of oat and barley varieties.

OATS

C.I. No.	Name	Yield per A. bu.	Wgt. per bu. lbs.
493	Golden Rain	70.9	40
560	Victory	70.6	38.5
659	Silvermine	66.9	37.5
658	Big Four	65.6	37.5
134	Swedish Select	61.9	38
656	Early Mountain	61.5*	38
551	White Russian	53.4	38
160	Banner	48.1	37
459	Kherson	45	34
170	Perm	45	31.5
165	Sixty Day	42.2	34

BARLEY

C.I. No.	Name	Yield per A. bu.	Wgt. per bu. lbs.
532	Primus	42.7	51.5
186	Swan Neck	41.1	48
531	Hannchen	35 *	52
203	Hanna	31.4	52
863	Manchuria	30.6	46.5
575	Gatami	27.5	50.5
626	Common California	26.7	44
262	Hull-less	16.7**	61

* Average of check plats.
** 60 pounds.

Williston Substation. Sept. 29. Total precipitation for the past week, .65 of an inch, of which .55 of an inch came in the form of snow. Since that time the weather has been warm and dry. Several light frosts have occurred with only a minimum temperature of 30 degrees and corn has been only slightly damaged thereby.

On an auto trip made this week about 20 miles south of Williston, examination was made of a field of corn grown by one of the boys who entered the corn-growing contests under the management of the North Dakota Better Farming Association. The yield was estimated at about 52 bushels per acre of 100 per cent mature Wills Dak. flint corn. Most of the farmers in this section had thrashed wheat and oats and obtained yields of from 6 to 15 bushels of wheat and from 15 to 20 bushels of oats. Yields of 20 bushels of wheat were obtained in a few cases.

Probably 85 per cent of the thrashing is completed with the exception of flax. Considerable flax is being cut but it has been damaged to some extent by the light frosts. Flax in this vicinity has been late in ripening and is of rather poor quality. The few farmers who have thrashed their flax have obtained from 5 to 10 bushels per acre.

UTAH:

Nephi Substation. Sept. 26. Weather the past week has been cold, with variable winds, accompanied by rain and snow. Total precipitation, .39 of an inch. Maximum temperature, 84 degrees (Sept. 20); minimum, 27 (Sept. 26). The first frost of the season occurred on Sept. 20, checking the growth of intertilled crops.

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NEWSLETTER

OF THE

OFFICE OF CEREAL INVESTIGATIONS,

BUREAU OF PLANT INDUSTRY,

U. S. DEPARTMENT OF AGRICULTURE.

Volume V.

OCT 11 1913

OCT 11 1913

October 10, 1913

MEMORANDUM.

From the Office of the Chief of the Bureau comes the following memorandum concerning the use of the frank.

"October 8, 1913.

In view of the fact that this Department has recently received a great many complaints from the Post Office Department regarding the misuse of the postage frank by our agents in the field, it is requested that all employees who have occasion to use the frank for sending communications through the mails be instructed as to the proper method of signing such communications.

To be clearly within the law authorizing the transmission of correspondence and circulars relating exclusively to the business of the Government of the United States, it is essential that every communication, whether written or printed, mailed in penalty envelopes, should bear both the signature and the official title of the sender. This fixes the responsibility for the use of the penalty envelopes in such a way that the Post Office officials can determine in almost every case as to the legality of such use of the mails without referring the matter to the Department.

Very truly yours,

(Signed) L. C. Corbett.

Acting Chief of Bureau."

OFFICE NOTES.

Mr. Carleton R. Ball will leave Washington Monday night (October 13th) for Tulsa., Oklahoma, to superintend the installation and demonstration of the exhibit of the Office of Cereal Investigations at the International Dry-Farming Congress to be held from October 22 to November 1, inclusive. To assist Mr. Ball in this work the following field men of the Office will go to Tulsa: Messrs. L. C. Aicher, N. C. Donaldson, Jenkin W. Jones, F. A. Kiene, Jr., John F. Ross, and B. E. Rothgeb.

Mr. Carleton will probably also attend the International Dry-Farming Congress, first attending the National Grain Dealers' Convention which meets at New Orleans from October 14 to 16, inclusive.

This number of the Office Newsletter will be the last of the weekly series. Beginning October 24th the Newsletter will appear twice a month until further notice.

It is necessary to again call attention to the necessity for sending in notes for the Newsletter so that they may be assembled on Thursday, as it is the purpose to mail the Newsletter not later than Saturday.

NOTICE TO FIELD MEN.

Carbon copies of transportation requests must be mailed to this Office as soon as ticket is purchased. This applies to Temporary Special Disbursing Agents as well as to other members of the Office force.

FIELD NOTES.

VIRGINIA:

Arlington Experiment Farm. October 8. Maximum temperature for the week, 80 degrees; minimum, 50 degrees. Total precipitation, 2.28 inches. The seeding of winter oats and barley in field plats was completed on October 7th. Preparations are about completed for seeding winter wheat in both the nursery and field plats.

LOUISIANA:

Crowley Rice Experiment Station: Oct. 6. The weeks of September 14 to 20, inclusive, was ideal for harvesting, and all varieties far enough advanced were cut, except in the nursery. Maximum temperature for the wekk, 88.5 degrees (Sept. 20); minimum, 63 degrees (Sept. 16). Precipitation .11 of an inch (Sept. 17th); total for the week, .12 of an inch.

With 6.74 inches of rain during the week of September 21 to 27, inclusive, rice in the field and in the shock was greatly damaged.

The precipitation for the week of September 28 to October 4, inclusive, was 2.23 inches. Mr. Jenkins writes that owing to the daily rains and warm weather in the vicinity of Crowley, rice has sprouted in the shock and Japanese rice has sprouted in the field before being cut; although only two or three varieties that he is growing have sprouted before being cut, and because of his method of curing and shocking only a little grain at the top of the shock has sprouted.

On October 4th the increase plats were harvested and during the week harvesting of the greater part of the nursery was completed. Most of this work, as well as note taking, was done in the rain.

Between and including the dates September 25th to October 4th 9.27 inches of rain fell. During the month of September the precipitation was 13.67 inches.

Prof. R. Shoji of the Agricultural College at Tohoku Imperial University, Sapporo, Japan, visited the Station on September 26th.

TEXAS:

Amarillo Cereal Field Station: Oct. 4. Maximum temperature for the week, 80 degrees; minimum, 39 degrees. Precipitation, .18 inches (Sept. 27). The first "Date-of-Seeding" of winter wheat was made October 1st.

The dates for the Panhandle State Fair are October 6 to 11. Some material for exhibition has been sent from the station.

Beaumont Cooperative Rice Farm: (Amelia) Oct. 4. During the week from September 21 to 27, inclusive, rain fell almost continually; 11.11 inches of this came in less than three days. During the week from September 28 to October 4, inclusive, heavy precipitation occurred. Much damage has been done to rice in the shock and in the field. Thrashing is delayed, and the loss can not now be estimated. Reports from all over the rice belt tell of damage to the crop.

On account of the heavy rains and the flooded condition of the station it has been impossible to plow and prepare for fall plantings. This delay will continue until proper drainage is secured, as even under normal conditions it would be impossible to plow now for ten days at least. Thrashing will be in about the 15th of October if the weather clears and the crops have time to dry by that date.

KANSAS:

Hays Branch Experiment Station. Oct. 6. Weather the past week has been very pleasant. General seeding on the station is practically finished and farmers in this locality are well along with the work. Nearly all farmers seeded early before the rains in order that much-needed pasture might be available for stock. Practically all the wheat in western Kansas is seeded in stubble or on ground that has been disked only. Late rains gave no opportunity to destroy volunteer wheat.

COLORADO:

Akron Experiment Farm. Oct. 5. Weather the past week has been cool and damp. It is expected that the work of planting the nursery will be finished the first of the week.

SOUTH DAKOTA:

Highmore Substation: Oct. 4. Rain last night and to-day amounting to about .3 of an inch will bring up the winter grains not started. All winter grains in the nursery are doing nicely.

NORTH DAKOTA:

Dickinson Substation. September 27. During the week there was a precipitation of .69 of an inch in the form of snow and rain. Thrashing was resumed on the 26th of September but discontinued the next day to allow for fall plowing and harvesting corn. Following are the yields obtained from wheat varieties:

WHEAT VARIETIES.

C. I.	Name	Actual Yield Bu per A.	Weight per Bu.
1440-8	Kubanka	31.2	62
1494	Arnautka	30.9	61
3329	Red Fife	28.3	60
3022	Rysting	28.1	59
3322	Durum No. 5	28	61.5
3318	Velvet Chaff	27.8	62
3314	Cross Bred Blue Stem	27.1	59
3315	Huron	26.9	60
1440	Kubanka	26.7	62
1517	Ghirka (Av. Chks.)	26.6	61
3328	Preston	26.2	61
3323	Durum No. 7	25.8	61.5
3031	Red Fife	25.6	60
3319	White Fife	24.8	60
2874	Minn. 169	24.8	58.5
3316	Pringles Champlain	24.8	60
3741	Marquis	24.2	60.5
2492	Manchuria	18.1	60

UTAH:

Nephi Substation. Oct. 3. Cloudy weather prevailed during the past week with three light showers of rain which gave less than .01 of an inch in precipitation. Maximum temperature the past week, 74 degrees (Sept. 28); minimum, 33 degrees (Sept. 27).

The "date-of-seeding" tests were planted on October 1st with the following winter grains: Turkey Red and Koffoid wheats; Black Winter emmer; Boswell oats; and Utah barley. The recent rains have put the soil in good condition for fall seeding.Corn and field peas in rotation have been harvested.

The burglars who entered the buildings at the Nephi Substation on April 17, 1913, and stole Federal and State property, were tried at Nephi in the Justice Court on September 27th and 29th. They were bound over to the District Court which will sit on October 27th. As a witness in the case Mr. Ellison will be detained in Nephi until about November 5th.

OREGON:

Eastern Oregon Dry-Farming Substation. Oct. 7. Weather for the last three weeks has been cool and dry. The total precipitation for the month of September was .49 of an inch, the highest for any one day being .21 of an inch (Sept. 28th). The total rainfall for the months of July, August, and September was .6 of an inch.

The lowest temperature yet recorded this fall was 33 degrees on the night of September 23rd. The highest temperature during the past three weeks was 80 degrees on September 27th.

Farmers are waiting for rains before seeding winter grains, as it is considered unsafe in this region to seed in dry ground.

A date-and depth-of-seeding test was begun on Aug. 28, duplicate plats--shallow and deep--having been seeded every two weeks since that date. Seedings have been made with the single disk, double disk, and hoe drills for comparison. To ascertain the effect of treating the grain with formalin on the germination of winter wheat when seeded under unfavorable conditions, several twentieth-acre plats have been seeded to wheat with and without treatment. On the earliest seedings planted deep (about 4 inches) the plants have emerged, though in some instances the stand is uneven. In every instance there is a much better stand on the plats where the wheat was not subjected to the formalin treatment. No plants have emerged on any of the shallowly planted plats.

NEWSLETTER

OF THE

OFFICE OF CEREAL INVESTIGATIONS,

BUREAU OF PLANT INDUSTRY,

U. S. DEPARTMENT OF AGRICULTURE.

Volume V.

OCT 24
1913

October 24, 1913.

MEMORANDA

Memorandum No. 44, issued by the Office of the Assistant Secretary, dated October 11, regarding the policy of the Department of Agriculture in the matter of participation in expositions, fairs, etc., appears in full as follows:

"In view of the attitude of Congress in the matter of making exhibits at expositions, congresses, fairs, etc., as evidenced by legislation giving specific authority to make exhibits at the National Corn Shows and the Annual Dry Land Congress, etc., it is believed highly inadvisable and unwise for the Department to expend any of its funds for such purpose, unless there is specific authority from Congress to do so. Where, however, the officers of any exposition or fair are willing to bear the entire expense of preparing, transporting, and caring for the exhibits, including the expense of departmental employees while in attendance at such exposition, there would appear to be no objection to participation by this Department provided the regular work of the Department is not interrupted."

Memorandum No. 48, from the Secretary's Office, dated October 13, 1913, regarding the purposes of the recently established Office of Information, reads as follows:

"Some time ago the Office of Information was established in the Department, with Mr. G. W. Wharton in charge. In order that the purposes of this Office may be fully understood, the following statement is made:

> The function of the Office of Information is to secure the widest possible circulation for the discoveries and recommendations of the scientists, specialists, and field workers in the Department of Agriculture. The facts given out may be secured from printed bulletins or circulars, official reports or oral statements of specialists. The matter so prepared and disseminated shall give accurate and popular statements of the work of the Department in a form that will attract the attention of readers and lead them to adopt the methods recommended.

All matter before issue by the Office of Information shall first have the approval of the Chief of the Bureau, division or office in which the information originated, and shall then receive the approval of the Secretary or Assistant Secretary. The above instructions as to the character of the matter to be issued shall apply fully to the matter published in the Weekly News Letter or in bulletins, circulars, announcements, or any other information supplied to the public in oral or written form by the Office of Information.

It is requested that all bureaus, divisions and offices of the Department will cooperate in every way with the Office of Information, in order that its purposes, as outlined above, may be carried out to their fullest extent."

(Signed) B. T. Galloway,
Acting Secretary.

NOTICE TO FIELD MEN

For the guidance of members of the Office it is deemed wise to call attention to General Order No. 140, dated June 9, 1910 (effective July 1, 1910) which specifically announces the duties of the Solicitor of the Department of Agriculture. The following extract is herewith appended:

'The Act of Congress approved May 26, 1910, contains the following provision:

"Hereafter the legal work of the Department of Agriculture shall be performed under the supervision and direction of the Solicitor."

To carry into effect this provision of law it is hereby ordered that the legal work of the various bureaus, offices, and divisions of this Department shall hereafter be conducted as follows:

Bureau of Plant Industry.- The legal work of the Bureau of Plant Industry, including the drafting of agreements and all other matters on which legal advice is necessary, shall be referred to the Solicitor.

Compilation of laws in which the Department is interested will be prepared under the direction of the Solicitor, when requested by a chief of bureau and ordered by the Secretary. All requests for authorization of any Department officers or employees to travel for the purpose of attending court proceedings as witnesses, or to confer with officers of the Department of Justice concerning the preparation of cases for trial, as well as accounts rendered for expenses incurred under such authorizations, shall be submitted to the Solicitor for his approval. Arrangements for the employment of necessary witnesses not connected with the Department shall also be made with his approval.'

OFFICE NOTES

Mr. Carleton was detained in Washington and therefore did not attend the National Grain Dealers' Convention at New Orleans. He left Washington Wednesday, (October 22) to attend the meetings of the International Dry-Farming Congress at Tulsa, Okla., and will also visit College Station and Amarillo, Texas. Mr. Carleton will return to Washington the first week in November.

FIELD NOTES

VIRGINIA:

Arlington Experiment Farm. Oct. 15. Weather the past week has been cool, with a maximum temperature of 77 degrees (Oct. 9) and a minimum of 39.5 degrees (Oct. 14). A precipitation of 0.16 of an inch occurred on October 12. The seeding of winter wheat in field plats was completed today. Winter oats and barley have germinated rapidly and are looking well.

Oct. 22. Cold and cloudy weather had prevailed during the past week. Maximum temperature, 75 degrees; minimum, 31 degrees. Total precipitation for the week, 0.72 of an inch. These rains have been of material benefit to fall-seeded grains. The seeding of winter wheat in the nursery is about completed.

LOUISIANA:

Crowley Rice Experiment Station. Oct. 11. The unfavorable conditions reported in the last Newsletter continued during the week of October 5 to 11. A north wind on the 11th caused a decided drop in the temperature. The weather cleared that night and the cold north winds prevailed during Sunday and Monday. By the 15th the wind was east with a rising temperature. Total precipitation for the week ending October 11 was 1.13 inches.

Mr. Chas. W. Whitney, General Purchasing Agent, Notomas Consolidated of California, San Francisco, was a visitor at the station on the 8th of October.

TEXAS:

Amarillo Cereal Field Station. Oct. 11. Maximum temperature for the week, 84 degrees; minimum, 34 degrees. There was no precipitation and high winds prevailed for several days. On the wheat plats seeded on October 1 plants had emerged on the 7th.

The first meeting of the Panhandle State Fair Association during the week proved a success.

Oct. 18. Maximum temperature for the week, 85 degrees; minimum, 40 degrees. Precipitation, 0.62 of an inch. This rain came in three showers in as many nights, keeping the ground too wet for seeding the wheat varieties as was intended. The seeding will be done as soon as possible.

Mr. Ross and Mr. Rothgeb left Amarillo on the 14th for Tulsa, Okla., to attend the International Dry-Farming Congress.

Beaumont Cooperative Rice Station. Oct. 11. During the week from October 5 to 11, inclusive, rain fell on the 9th and the 11th. The remainder of the week was fair and warm. All nursery rice, except that planted from bulk seed and four late-maturing head-row plantings, has been harvested. No plowing or fall planting has been possible up to this time because of continued rains.

Practically no thrashing has been done by the farmers on account of the continued wet weather in the vicinity.

Attention is called to the fact that the post office at Amelia was discontinued on October 1 and that Mr. Johnston's address is now R. F. D. #1, Beaumont, Texas.

KANSAS:

Hays Branch Experiment Station. Oct. 11. The weather has been very fine, with no frost. Mr. Kiene reports that while the planting is completed with the exception of rate- and date-of-seeding tests, much of the wheat is just emerging.

Wheat all over western Kansas has all been seeded.

COLORADO:

Akron Experiment Farm. Oct. 11. The weather has been favorable for the farm work. Maximum temperature for the week, 75 degrees; minimum, 27 degrees. Precipitation, 0.01 of an inch. The winter nursery is all planted. Another part of the date-of-seeding test has been planted and nearly all of the first plantings are up, but so far the stand is not good. The weather has been too cold for rapid growth. Nursery thrashing is again in progress.

WYOMING:

Cheyenne Field Station (Archer). Oct. 10. The station work is practically all completed with the exception of the fall plowing of about eight acres. The fall grains are all up and looking well.

MONTANA:

Judith Basin Substation (Moccasin). Oct. 6. Two snowstorms have occurred this fall. The one on September 22 lasted two days. It was general over the State and in some sections the fall was very heavy. At this date there are from 6 to 8 inches of snow on the ground, but it is melting fast and will probably be gone in a few days.

The fall seeding was all completed by the 20th of September and fairly good stands have been obtained.

Mr. Donaldson spent ten days in the vicinity of Helena and Bozeman and in the Shields Valley. At Helena he visited the Montana State Fair, where some fine grains from various parts of the State was exhibited. At Bozeman, Mr. Donaldson consulted with the officials of the Agricultural Experiment Station. He found harvest operations in the Gallatin Valley much later than in the Judith Basin. The heavy frost that occurred in nearly all parts of the State on July 12 injured barley and peas in the Gallatin Valley but not as much as was feared at first.

The Shields River Valley is one of the newer dry-land sections which is developing rapidly. A large part of this year's crop of winter wheat was planted on new breaking and was seeded late, so that the yields were not very good. On well prepared land, yields ranging from 30 to 45 bushels are reported. Spring wheat does not seem to do well in this section of the country and the chief grain crops are winter wheat, oats, and barley.

UTAH:

Nephi Substation. Oct. 6. Work at the station is in good shape and near completion, though recent rains have delayed it somewhat. A heavy snow storm occurred on Saturday, October 4, giving 1.10 inches in precipitation.

Oct. 10. Maximum temperature for the week, 61 degrees (Oct. 8); minimum, 14.5 degrees (Oct. 6). Precipitation for the week, 1.10 inches, Oct. 5; 0.02 of an inch, Oct. 7; 0.04 of an inch, Oct. 8; and 0.12 of an inch, Oct. 9. Total, 1.28 inches. Wet and cold weather prevailed during the past week and made field work impossible. Grain planted on the 15th of September has emerged.

The burglars whose movements have been reported in former newsletters escaped from the jail on October 8 and are still at large.

Oct. 18. The past week has been generally fair with clear weather, which has permitted the continuance of the work at the station. No precipitation occurred during the week. The evaporation was highest on Oct. 13, amounting to 0.191 of an inch. Maximum temperature for the week, 74 degrees (Oct. 13); minimum, 23 degrees (Oct. 17).

The seeding of the fall plats has been completed. Potatoes in rotation have been harvested. The soil is in good condition at present after a week of stormy weather. A good germination of cereals on field plats is expected this fall.

CALIFORNIA:

Biggs Cereal Field Station. Oct. 9. The weather has been warm for this season of the year and there has been no rain. The Italian rices were thrashed about two weeks ago, yielding about 3600 pounds per acre. The cutting of series 100 and 200 was begun on the 6th and finished on the 8th of October. If the present favorable weather continues, thrashing of the rices will be done next week. The number of visitors at the farm is daily increasing.

Many of the farmers are harvesting. Most of the late rice looks now as though it will mature. Indications are that there will be a larger acreage of rice next season than was anticipated.

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NEWSLETTER

OF THE

OFFICE OF CEREAL INVESTIGATIONS,

BUREAU OF PLANT INDUSTRY,

U. S. DEPARTMENT OF AGRICULTURE.

NOV 13 1913

Volume V.

NOV 7
1913

November 7, 1913.

NOTICE TO FIELD MEN

It is desired to call attention to the fact that transportation requests drawn on one appropriation must not be used for travel on another appropriation. For example, transportation requests under the appropriation "International Dry Land Congress, Tulsa, Oklahoma, 1913-1914," are not valid under the appropriation "General Expenses, Bureau of Plant Industry, 1914, Cereal Investigations." (See paragraph 12, page 12, Fiscal Regulations of the U. S. Department of Agriculture, 1913.)

Care should also be taken in the matter of using transportation requests under a letter of authorization other than the one for which it was issued, even on the same appropriation. This may be done, however, in case of emergency if thereby the traveler can avoid paying a cash fare. In this event, the number of the authorization should be changed at once on the transportation request, or a note concerning the change should accompany the copies of the requests when they are sent to this Office. Failure to bear this in mind causes much confusion and may result in financial loss to the traveler.

Official communications intended for the Department, such as copies of transportation requests, accounts, memorandum bills of lading, etc., should be transmitted through this Office in order that proper records may be made.

OFFICE NOTES

Mr. Carleton R. Ball returned on Friday, October 31, from Tulsa, Okla., where the International Dry-Farming Exposition was held from October to November 1, inclusive. Mr. Ball reports very bad weather during the entire period of the exposition with a consequent small attendance.

Miss Rachel M. Woldstad was appointed to the position of Stenographer and Typewriter in this Office on the 8th of November.

Mr. Curtis D. Daughton was appointed Messenger Boy in this Office on the 30th of October.

Mr. B. E. Rothgeb came in from Tulsa, Okla., on November 6 to remain in Washington for the winter.

FIELD NOTES

VIRGINIA:

Arlington Experiment Farm. October 29. Weather during the past week has been warm for this season of the year. Maximum temperature, 70 degrees; minimum, 34 degrees. Total precipitation for the week, 1.61 inches, of which 1.42 inches occurred on the evening of October 24 and the following morning, causing some damage to field plats by washing. Practically all the winter wheat has emerged and is making a rapid and vigorous growth.

Nov. 5. Clear and windy weather has prevailed during the past week, with a maximum temperature of 65 degrees and a minimum of 28 degrees. No precipitation occurred during the week.

Total precipitation for October, 5.57 inches.

Indications are that all winter grains will make sufficient growth to withstand winter conditions.

TEXAS:

Amarillo Cereal Field Station. Oct. 29. The weather has varied widely during the week. The changes have been from warm, balmy days to high winds, dust-storms, snow-storms, cold weather, etc.

All the fall seeding has been completed with the exception of some date-of-seeding wheat.

COLORADO:

Akron Experiment Farm. Oct. 27. Weather has been very windy for the last few days. The nursery planting is up and most of the rows have made nearly perfect stands. The third date-of-seeding test of winter wheat will be made today.

SOUTH DAKOTA:

Highmore Substation. Oct. 25. Weather conditions are favorable for late-sown winter grains, although there is very little moisture in the soil. Work on the farm is progressing nicely.

The lack of moisture in the soil prevails in most of the State.

NORTH DAKOTA:

Williston Substation. Nov. 1. Weather is clear and warm. The lowest temperature so far has been 6 degrees above zero. There have been several snow-storms during the past month, but the total precipitation has not been heavy; at present the ground is entirely bare. The roads are in excellent condition and each day of the week there are continual strings of wagons loaded with grain coming into Williston.

CALIFORNIA:

Biggs Cereal Field Station. (Station notes) Oct. 24. Weather continues favorable for the harvesting and thrashing of rice. The cultural plats are thrashed, the best yield being 6,600 pounds to the acre. The eight early-seeded plats all yielded over 6,000 pounds. The earliest seeding produced the best yields. Some of the poorer plats yielded at the rate of about 4,000 pounds.

Oct. 29. All the rice thrashing has been completed without rain. The increase plats yielded very well. A few of the yields are as follows: C. I. No. 1561, 4,300 pounds; No. 1642, 5,420 pounds; No. 1643, 3,240 pounds; No. 1644, 3,600 pounds; No. 1645, 4,300 pounds; and No. 1607, 5,420 pounds.

(Sacramento Valley notes) Oct. 24. The rice harvest in the Valley will be completed in a few days and thrashing is progressing nicely. Considerable rice has been thrashed and stored. Yields on the commercial plantings are good, running about 3,500 pounds on the average. Several farmers have obtained a yield of 4,000 pounds or better.

Oct. 25. The rice that is now being thrashed is of excellent quality, except that some of it was harvested too early and contains green kernels. The harvested fields and several thrashing rigs are attracting considerable attention on the part of the many people who are looking over the country.

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NEWSLETTER

OF THE

OFFICE OF CEREAL INVESTIGATIONS,

BUREAU OF PLANT INDUSTRY,

U. S. DEPARTMENT OF AGRICULTURE.

Volume V.

NOV 21

1913

November 21, 1913.

NOTICE TO FIELD MEN.

With the Officer in charge of Property of the Bureau of Plant Industry arrangements have been made for the disposition of Government property for which there is no further use by the offices owning it. These articles will be transferred to any office applying for the same by regular invoice and receipt. The following is a list of the property recently turned into the Property Room, where it may be inspected from now until December 15th. Field men desiring any of the articles mentioned will kindly see the Financial Clerk of this Office concerning transfer of same.

1 Remington typewriter No. 2, poor condition.
5 Attachments, card, for Remington typewriter, good
1 Turntable, microscope, fair.
2 Cameras, 2-1/2 by 4-1/4.
1 " 3-1/2 by 3-1/2
2 " 3-1/4 by 4-1/4
1 " 3-1/4 by 5-1/2
2 " 4 by 5
1 " 5 by 4
1 " 5 by 7
1 " size not known
5 Cases, carry, asst. (including camera cases), fair
17 " thermometers, brass (with and without thermometers), Fair.
19 Castors, chair, good
3 Chairs, bentwood, fair
2 " kitchen, fair
39 Boxes envelopes, white plain 3 by 6, fair
7 Frames, printing, fair
2 Boxes glasses, cover, microscope, fair.
2 Hinges, spring, good
23 Holders, plate camera, fair
8 Lens, camera, fair
2 Kettles, assorted, fair
1 Axe, hand, fair
59 Thermometers, assorted, fair condition
1 Rack, stamp, good
3 Rugs, assorted, fair
2 Sections, base, fair
17 Shutters, camera, fair
1 Sign, office, good
6 Stamps, dating, fair
1 Lot stamps, rubber, good
1 Can, gasoline, copper, fair
1 Desk, typewriter, flat top, fair.

OFFICE NOTES.

On Friday evening, November 7, Dr. C. E. Leighty gave an illustrated talk on wheat at Eklo, Md., at the Farm products Exhibition and Congress under the auspices of Rural Club of Sixth District.

Mr. Jenkin W. Jones, Superintendent of the Cheyenne Experiment Farm, Archer, Wyo., arrived in Washington from Tulsa, Okla., on Saturday, November 8, for the purpose of writing a report of the year's work at Archer. After consultation with Professor Scribner it was decided to send Mr. Jones to Chicago in connection with the Bureau of Plant Industry exhibit at the United States Land Show which opened November 22 and will close December 9. Mr. Jones left Washington for Chicago on November 15th and will return about December 14th.

During the sessions of the various agricultural societies which met in Washington from November 10 to 21 the following visitors were at the Office:

President, C. A. Lory, Colorado Agricultural College.
Director, C. P. Gillette, Colorado Experiment Station.
President W. J. Kerr, Oregon Agricultural College.
Extension Director R. D. Hetzel, Oregon Agricultural College.
Director, F. B. Linfield, Montana Experiment Station.
Director H. G. Knight, Wyoming Experiment Station.
President J. H. Worst, North Dakota Agricultural College.
Director W. M. Jardine, Kansas Experiment Station.
Prof. L. A. Fitz, Kansas Agricultural College.
Dr. H. H. Love, Department of Plant Breeding, Cornell University.
Mr. W. T. Craig, Special Agent of Cereal Investigations, Department of Plant Breeding, Cornell University
Prof. R. W. Thatcher, Agricultural Chemist, Minnesota Experiment Station.
Director B. Youngblood, Texas Experiment Station.
Prof. A. B. Conner, Agronomist, Texas Experiment Station.
Prof. George Roberts, Agronomist, Kentucky Experiment Station.
President A. M. Soule, Georgia College of Agriculture.
Prof. John R. Fain, Agronomist, Georgia Experiment Station.
Director J. F. Duggar, Alabama Experiment Station.
Director P. H. Rolfs, Florida Experiment Station.
Prof. J. L. Burgess, North Carolina State Department of Agriculture.
Director I. D. Cardiff, Washington Experiment Station.
Director E. D. Ball, Utah Experiment Station.
Mr. P. S. Khankhoje, Washington Experiment Station.
Mr. E. R. Bennett, Horticulturist, Rock Island Lines, Oklahoma City, Okla.

From the 10th to the 18th of November the following field men of the Office have arrived in Washington to spend the winter months in writing their annual field reports and in doing laboratory work:

J. Allen Clark, Dickinson, N. Dak.
N. C. Donaldson, Moccasin, Mont.
F. R. Babcock, Williston, N. Dak.
A. D. Ellison, Nephi, Utah.
D. E. Stephens, Moro, Ore.

FIELD NOTES

VIRGINIA:

Arlington Experiment Farm. November 13. Weather during the last few days has been cold for this season of the year. Maximum temperature, 66 degrees (Nov. 7); minimum, 25 degrees (Nov. 11). A precipitation of 0.67 of an inch occurred on Nov. 9.

The total precipitation for October was 4.77 inches instead of 5.57 inches, as given in the Newsletter of November 7.

November 19. Weather during the past week has been generally cloudy, with a precipitation of 1.17 inches. Maximum temperature, 66 degrees; minimum, 30. Owing to the somewhat heavy precipitation and lack of sunshine for the past few weeks, winter grains have not made a very vigorous growth.

LOUISIANA:

Crowley Rice Experiment Station. Nov. 15. Excellent weather has prevailed since the first of the month, making ideal conditions for thrashing. The first frost occurred on Oct. 28th.

TEXAS:

Amarillo Experiment Farm. Nov. 19. Weather is fine. Fall plowing is being done. The fall grains are looking well; they have all emerged except the latest planting,- Nov. 15th.

Beaumont Cooperative Rice Experiment Station. (R. F. D. #1, Beaumont) Nov. 15. Notwithstanding the bad weather all the rice on the station farm has come out well. Though the bundles were wet to the bands little rice was lost. The rice in the rotation and cultivation tests has been thrashed. That of the increase plats will be thrashed the coming week.

The Southeast Texas Fair opened on November 15th at Beaumont, Texas.

KANSAS:

Hays Branch Station. Nov. 12. The month of October was dry and cold and wheat has not made much growth. Stands are good, however, and the ground is in fairly rough condition, for which reason little trouble from blowing is anticipated. Although there were four dusty days none of the station fields suffered.

The grain-sorghum area is being listed and plowed for fallow ground next year. All the kafir fields on the station will pass through the winter in the listed condition. The light crop having been taken off for silage, an amount of stubble insufficient to hold the soil or the snow remains, hence the operation.

COLORADO:

Akron Experiment Farm. Nov. 11. Weather is generall cold with an occasional warm day. Precipitation has been light and unless more rain falls before the ground freezes winter grain will suffer. Winter wheat is not looking as vigorous as it should. Continued cool weather and frequent frosts have checked the top growth. The stand on some plats is good, while on others it is poor. The nursery is more uniform, however,

The grain-sorghums that matured well enough to germinate have been headed. This practically completes the outside work. Several hundred nursery thrashings are yet to be weighed and recorded and material prepared to be sent in to the Office. Grain has nearly all been cleaned.

On a recent trip to Fort Collins it was observed that much of the dry-land winter wheat had made good growth, as the rainfall has been greater than in the vicinity of the station. Many farmers are growing good varieties of grain, but there is still much room for improvement. Several bushels of the best winter varieties of wheat and some spring wheat have been sent from the station to farmers who can be relied upon to keep their seed pure.

UTAH:

Nephi Substation. Nov. 5. Precipitation of .73 of an inch occurred on Nov. 2 and 3, which was of much value to the crops. The work at the station is completed and the fall crops are looking well. Mr. Ellison is leaving for Washington, D. C.

CALIFORNIA:

Biggs Cereal Field Station. Nov. 11. Heavy rains have occurred since the first of the month and the weather has been cloudy. As a consequence the thrashing of rice has been delayed.

OREGON:

Eastern Oregon Dry-Farming Substation. (Moro) Nov. 3. Weather conditions during most of October were favorable for the planting and growth of winter grains. A precipitation of 1.26 inches occurred on the 5th and 6th, which put the ground in excellent condition. Following this rain temperatures somewhat higher than seasonal prevailed giving the grain a chance to germinate. The total precipitation for the month was 1.87 inches; the total precipitation for the same month in 1912 was .78 of an inch. The highest temperature recorded during October, 1913, was 74 degrees (Oct. 23); minimum, 28 degrees (Oct. 27 and 28). In October, 1912, 69 degrees was the highest temperature recorded.

Most of the winter grains have the appearance of being able to withstand the winter. They comprise the following:

Wheat -	
For increasing pure seed for distribution to farmers-	40 acres.
Variety test	50 tenth acres
Tillage	30 " "
Rates, dates, and depth tests	30 " "
Barley-	
Variety test	20 tenth acres.
Emmer and oats	10 " "
Rye-	
Field seeding	10 acres.
Variety test	4 tenth acres.

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NEWSLETTER

OF THE

OFFICE OF CEREAL INVESTIGATIONS,

BUREAU OF PLANT INDUSTRY,

U. S. DEPARTMENT OF AGRICULTURE.

Volume V.

DEC 5 1

1913

December 8, 1913.

MEMORANDA

The following is a list of property turned into the Property Room by offices having no further use for it, and supersedes the list which appeared in the Newsletter of November 21.

These articles will be transferred to any office applying for same by regular invoice and reciept. It is requested that an inspection be made of articles desired, on or before the 13th instand, as any property on hand after that date will be disposed of.

5	attachments, card for Remington typewriter, good condition.
1	bath, copy, fair.
19	clips, board, fair.
3	burners, Bunsen, fair.
3	cabinets, card, asst., fair.
10	cameras, asst.
5	cases, carry, asst., fair (including camera cases)
17	cases, thermometer, brass (with and without thermometers) fair.
1	cover, typewriter, tin, fair.
3	desks, flat-top, fair.
2	boxes Glasses, cover, microscope, fair.
3	holders, eyeglass, good.
20	holders, plate, camera, fair.
8	lens, camera, asst.
3	racks, stamp, revl., good.
2	racks, towel, fair.
6	rugs, asst., fair.
4	sections, base, fair.
1	" card index, fair.
1	" file doc., "
4	" book, (attached stack), good.
1	" " (unattached), fair.
2	" tops, fair.
3	sharpeners, pencil, fair.
15	shutters, camera, asst.
1	sign, office, good.
6	stamps, dating, asst., fair.
1	lot stamps, rubber, hand (about 700), fair.
75	thermometers, asst., inaccurate.
1	turntable, microscope.

OFFICE NOTES.

On December 1st notification was received that the edition of 3,000 copies of Department Bulletin No. 30, entitled, "Cereal Investigations at the Nephi Substation," by P. V. Cardon, was ready for distribution.

FIELD NOTES

VIRGINIA:

Arlington Experiment Farm. Nov. 27. Maximum temperature for the week, 77 degrees (Nov. 26); minimum, 30 (Nov. 25). No precipitation has occurred. The warm, fair weather which has prevailed during the past week has been of material benefit to winter grains, especially to the late seeded plats in the plant nursery.

Dec. 3. Maximum temperature for the week, 56 degrees; minimum, 36. Precipitation of 0.57 of an inch has occurred.

KANSAS:

Hays Branch Station. Nov. 30. Weather has been warm and generally fair, which has greatly benefited the wheat. A much needed rain fell the night of November 29.

The Agricultural College and Experiment Station are cooperating with the State Normal Scool in a three weeks short course in agriculture and domestic Science which will be held at Hays beginning December 1. The opening day will be rally day, with Governor Hodges and PresidentWaters as speakers. An attendance of between three and four hundred is expected,

UTAH:

Nephi Substation. Nov. 29. During the month of November warm weather prevailed, with a precipitation of 1.81 inches. Because of these favorable climatic conditions the crops have made a sufficiently vigorous growth to withstand the winter.

IDAHO:

Aberdeen Substation. Nov. 29. Highest maximum temperature for November was 62 degrees; lowest maximum, 32. The lowest minimum temperature for the month, 12 degrees, was recorded November 22. Weather has been excellent for fall work, plowing being done until November 24. The ground is now frozen for the winter. There has been little precipitation this autumn, and to date only 8.98 inches have been recorded for 1913, as against 11.87 inches for last year.

Winter wheat is not in as good condition as it should be at this time of year, the stand being considerably below normal. Over 400 rod row variety tests remain to be thrashed. A hand thrasher has just been completed and the work will be begun soon.

Rabbits have caused great damage to the crops, many farmers having left them unharvested because of the ravages of this pest. Several thousand have been killed in a series of three drives recently held.

All station buildings were painted during the last two weeks of October. With the exception of fence repairing, all outside work on the station has been completed.

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NEWSLETTER

OF THE

OFFICE OF CEREAL INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE.

Volume V.

1913

December 19, 1913.

MEMORANDUM

Cereal Investigations Special Memorandum No. 3 was issued December 3, 1913, as follows:

OFFICE OF CEREAL INVESTIGATIONS

Reassignment of Clerical Force.

The following assignments of work and workers are made, subject to change as the needs of the service require:

Mrs. Kinney (Administrative Clerk)

1. General administrative supervision of all clerical work and workers, including messengers.
2. Private secretary to Cerealist; in charge of all mail, incoming and outgoing, and reference of all correspondence.
3. Preparation of field reports,
   Preparation of Project reports,
   Preparation of office newsletter.
4. Seed distribution.
5. Responsibility for all files:
   Catalogs (seed, implement, apparatus),
   Correspondence,
   Indices (of literature, correspondence, and general information),
   Mailing lists,
   Manuscripts,
   Maps and charts,
   Photographs (negatives, prints and slides),
   Project reports,
   Publications,
   Reports.

Miss Hudson (Financial Clerk)

Responsibility, for
Adjustment of accounts,

Appointments, letters concerning
Authorizations,
Bills of lading,
Bookkeeping,
Inventory,.
Memoranda of understanding,
Project estimates,
Requisitions (stock and purchase),
Statements, financial, (monthly) for office,
Statements for information of Congress,
Stock supplies..

Miss Chadwell (Clerk and Stenographer)

Mr. Ball and Assistant to Financial Clerk.

Miss Fissel (Clerk and Stenographer)

Messrs. Carleton and Ball

Miss Peacock (Clerk and Stenographer)

Messrs. Chambliss and Humphrey

Miss Roberts (File Clerk and Typist)

Assistant to Administrative Clerk

Miss Taylor (Clerk and Stenographer)

Messrs. Leighty and Warburton

Miss Thomas (Clerk and Stenographer)

Messrs. Harlan and Cardon

Mr. Townsend (Clerk)

Responsibility for Cereal Laboratory:
Accession records of cereals, including samples from environmental experiments,
Distribution records of cereals,
Cooperators' reports (filing reports as far as desired by specialists in charge),
Preparation of samples for distribution and for chemical and germination tests,
Preparation of cereal samples for reference collection.

Miss Woldstad (Clerk and Stenographer)

Messrs. C. H. Clark, B. E. Rothgeb, and miscellaneous dictation.

Mr. Bengel (Messenger)

Assistant in Cereal Laboratory,
Specially charged with work on "Underwood" Duplicator.

Mr. Daughton (Messenger)

Specified messenger's duties. (All requests requiring services of messengers outside of the office must be made through Mrs. Kinney.)

OFFICE NOTES

Mr. J. W. Jones, who has been in Chicago in connection with the Bureau of Plant Industry exhibit at the United States Land Show, returned to Washington on December 12.

FIELD NOTES.

VIRGINIA:

Arlington Experiment Farm. December 10. Cold and windy weather has prevailed the past week, with a maximum temperature of 63 degrees (Dec. 5), and a minimum of 21 degrees (Dec. 10). A precipitation of .32of an inch occurred on December 7.

December 17. The weather has been unusually fine during the past week. Maximum temperature, 65 degrees; minimum, 21 degrees. No precipitation has occurred during the week.

Several of the varieties of winter barley and oats in field plats were affected by the severe freezes of last week.

LOUISIANA:

Crowley Rice Experiment Station. December 7. The weather in southwestern Louisiana is extremely warm. Mr. Jenkins reports that the farmers in the vicinity of Crowley have finished thrashing.

TEXAS:

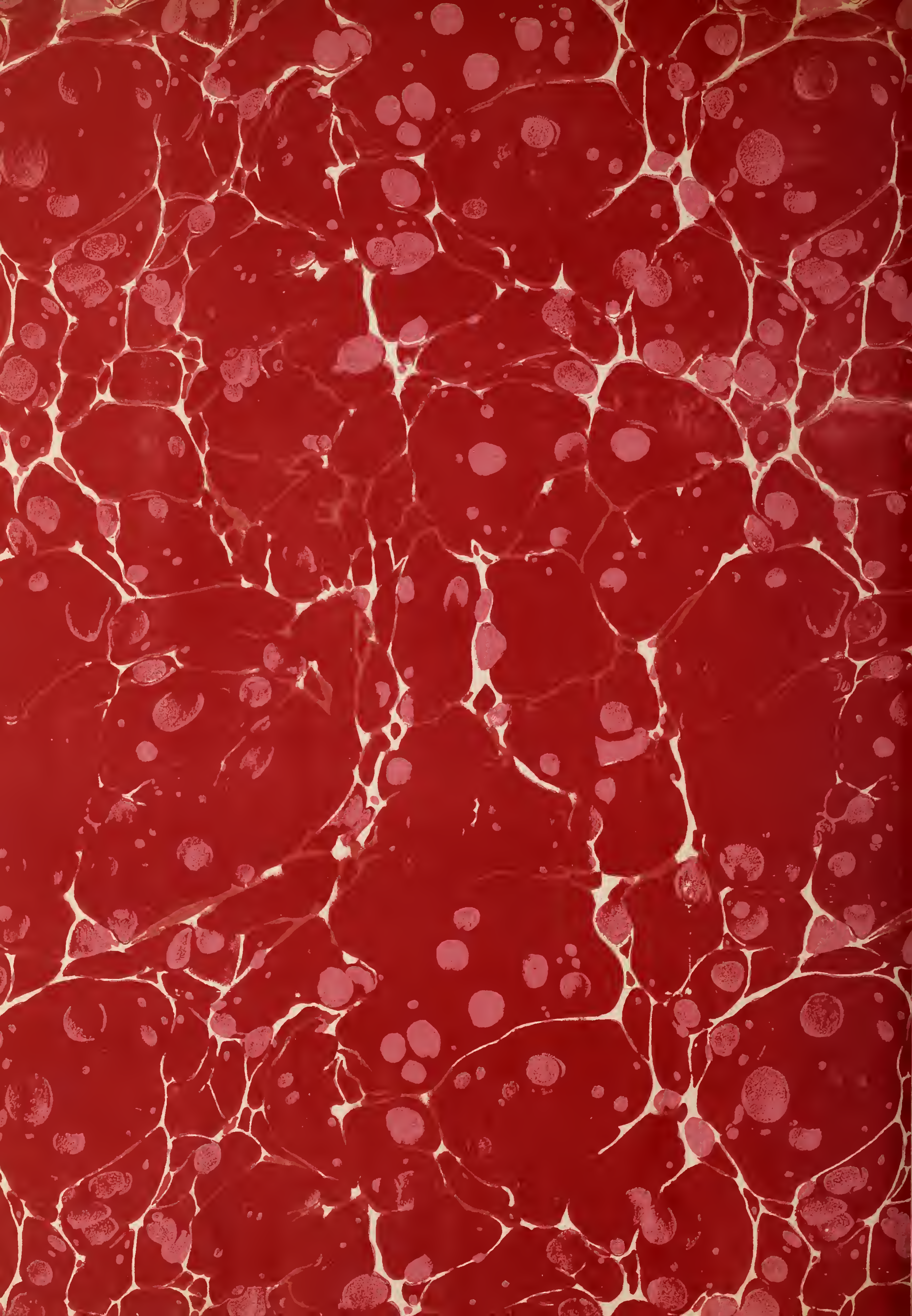
Beaumont Cooperative Rice Experiment Station. December 6. Mr. Johnston reports that rice millers are not buying rice at this time on account of the general unsettled financial conditions.

KANSAS:

Hays Branch Station. December 16. Mr. Kiene reports that wheat at Hays is not nearly so far advanced as at Manhattan. Culbertson and fall-sown Burt oats were not affected by frost at Hays, while at Manhattan they have nearly all been killed. A volunteer field of Stavropol barley (Spring) has withstood the freezing, and is as green and luxuriant as the earliest sown wheat.

CALIFORNIA:

Biggs Cereal Field Station. Mr. Adams reports that, on account of rains, no field work was done at the station during the month of November. In the Valley there are 800 acres of rice to be harvested. About sixty per cent of the rice crop has been thrashed. Rice yields are ranging from 2500 to 5500 pounds per acre, making an average of about 3200 pounds to the acre. The quality is good where the crop was handled properly. Rice in the field is still in good condition where well shocked. Most of the farmers who have not thrashed their rice are reshocking it. Shattered rice is sprouting in many fields.



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